First E-conference

42th Annual Virtual AOGD Conference 2020

Scientific Proceedings & Book of Abstracts

Conference Theme:

Women's Health Care in the Current Challenging Scenario

Organised by:

Institute of Obstetrics and Gynecology
Sir Ganga Ram Hospital, Sarhadi Gandhi Marg, Old Rajinder Nagar
New Delhi-110060

Scientific Proceedings
&
Book of Abstracts

42th Annual Virtual AOGD Conference, 2020

Agenda at a Glance

23th October, 2020
E-Quiz & E-Slogan Competition

24th October - 25th October, 2020
E-Poster & Free Papers

26th October - 29th October, 2020
Pre Conference Workshops

30th October - 01st November, 2020
Scientific Programme

02nd November - 06th November, 2020
Post Conference Workshops

Conference Theme:

Women's Health Care in the Current Challenging Scenario

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Institute of Obstetrics and Gynecology
Sir Ganga Ram Hospital, Sarhadi Gandhi Marg, Old Rajinder Nagar
New Delhi-110060

AOGD SECRETARIAT
Institute of Obstetrics & Gynaecology,
Sir Ganga Ram Hospital, Sarhadi Gandhi Marg, Old Rajinder Nagar, New Delhi-110060
Tel.: 011-42251768, 1789
E-mail: secretaryaogdsgrh2020@gmail.com

42th Annual Virtual Conference of Association of Obstetricians and Gynaecologists of Delhi

Organising Committee

Scientific Committee Advisors

Dr. Kanwal Gujral

Dr. Harsha Khullar

Dr. Abha Majumdar

Scientific Committee Chairpersons

Dr. Mala Srivastava

Dr. Geeta Mediratta

Dr. Chandra Mansukhani

Scientific Committee Co-Chairpersons

Dr. Debasis Dutta

Dr. Punita Bhardwaj

Joint Secretaries

Dr. Neeti Tiwari

Dr. Ruma Satwik

Treasurer

Dr. Shweta Mittal Gupta

Co Treasurer

Dr. Tarun Kumar Das

Workshop Committee

Dr. Debasis Dutta
Dr. Kanika Jain
Dr. Shweta M Gupta

Quiz Committee

Dr. Mamta Dagar
Dr. Richa Sharma
Dr. Sharmistha Garg
Dr. Ila Sharma

Competition Papers

Dr. Kanwal Gujral
Dr. Harsha Khullar
Dr. Sunita Kumar

Free Papers / Posters

Dr. Abha Majumdar
Dr. Sumita Mehta
Dr. Ruma Satwik
Dr. Sakshi Nayar

E- Slogans

Dr. Kanika Jain
Dr. Neeti Tiwari
Dr. Ankita Srivastava

E - Souvenir

Dr. Geeta Mediratta
Dr. Chandra Mansukhani
Dr. Sharmistha Garg

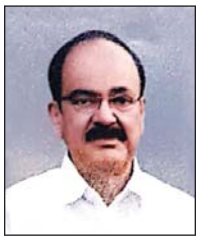
Registration

Dr. Shweta Mittal Gupta
Dr. Sunita Kumar
Dr. Tarun Das

डि. प्रशांत कुमार रेड्डी, भा.प्रशा.से.
D. Prasanth Kumar Reddy, IAS

सत्यमेव जयते

भारत के उप-राष्ट्रपति के निजी सचिव
PRIVATE SECRETARY
TO THE VICE-PRESIDENT OF INDIA
नई दिल्ली/NEW DELHI - 110011
TEL.: 23016344 / 23016422 FAX : 23018124



MESSAGE

The Hon'ble Vice President of India is happy to know that the Association of Obstetricians & Gynaecologists of Delhi (AOGD), is organizing its 42nd Annual Conference, virtually, on the theme "Women's Health Care in the Current Challenging Scenario", from October 30 to November 01, 2020.

The Hon'ble Vice President extends his greetings and congratulations to the organizers and the participants and wishes the event all success.

26/8/2020

(D. Prasanth Kumar Reddy)

New Delhi
26th August, 2020.

ARVIND KEJRIWAL

GOVT. OF NATIONAL CAPITAL TERRITORY OF DELHI
DELHI SECRETARIAT, I.P. ESTATE, NEW DELHI-110002
PHONE : 23392020, 23392030

D.O. No. : OSD CMI/39
Date : 07/10/20

MESSAGE

I am happy to know that Institute of Obstetrics & Gynaecology, Sir Ganga Ram Hospital is organizing the "**42nd Annual Conference of AOGD**" on 30th, 31st October and 1st November 2020 on "Women's Health Care in the Current Challenging Scenario."

The Academics is the main goal of Association of Obstetricians & Gynaecologists of Delhi. This is a premium Association, which takes care of the aspiration of all its' members. Since many years AOGD has been responsible for updating its members with recent advances through CMEs and Conferences. I am happy that during Corona times these academic activities are rightly converted to webinar and e-learning platform of eCMEs.

I congratulate the organizers of the Annual Conference and Dr. Mala Srivastava, President AOGD and her team for organzing such a comprehensive and learning platform.

I extend my best wishes for success of the Conference.

(ARVIND KEJRIWAL)

सत्येन्द्र जैन
Satyendar Jain
स्वास्थ्य, उद्योग, लोक निर्माण, ऊर्जा, गृह,
शहरी विकास, सिंचाई एवं बाढ़ नियंत्रण मंत्री
Minister of Health, Industries, PWD, Power, Home, Urban Development and Irrigation & Flood Control

सत्यमेव जयते

राष्ट्रीय राजधानी क्षेत्र, दिल्ली सरकार
Govt. of National Capital Territory of Delhi
'ए' विंग, सातवां तल, दिल्ली सचिवालय
'A' Wing, 7th Level, Delhi Secretariat,
आई.पी.एस्टेट, नई दिल्ली-110 002
I.P. Estate, New Delhi-110 002
दूरभाष/Tele No. : 23392116, 23392117
Fax No. : 23392044
E-mail : moh.delhi@gov.in

D.O. No. mimhealth/3392
Date : 07/10/2020

MESSAGE

I am happy to know that Institute of Obstetrics and Gynaecology, Sir Ganga Ram Hospital is organizing 42nd Annual Conference and 1st E-Conference of AOGD on 30th, 31st October and 1st November 2020. The Theme of the Conference has been aptly chosen as "Women's Health Care in The Current Challenging Scenario". This conference is planned on virtual platform which is the need of the day. The academics is the main goal of Association of Obstetricians and Gynaecologists of Delhi. This is a premium association which takes care of the aspiration of all its members. Since many years AOGD has been responsible for updating its members with recent advances through CMEs and Conferences. During Corona times these academic activities are rightly converted to webinar and e-learning platform of eCMEs.

I congratulate the organizer of the Annual Conference and Dr. Mala Srivastava, President AOGD and her team for organizing such a comprehensive and vivid learning platform. I wish this Conference all success. I am sure all the postgraduates and attending delegates of the conference will immensely benefit from this e-conclave.

(SATYENDAR JAIN)

प्रो.(डॉ.) सुनील कुमार
एम.बी.बी.एस एवं एम.एस.(एम्स)
PROF. (Dr.) SUNIL KUMAR
MBBS & MS (AIIMS)
स्वास्थ्य सेवा महानिदेशक
DIRECTOR GENERAL OF HEALTH SERVICES

सत्यमेव जयते

भारत सरकार
स्वास्थ्य एवं परिवार कल्याण मंत्रालय
स्वास्थ्य सेवा महानिदेशालय
Government of India
Ministry of Health & Family Welfare
Directorate General of Health Services

MESSAGE

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28/09/2020

(Sunil Kumar)

FOGSI President's Message

Greetings, dear FOGSIANS,

It gives me great pleasure to welcome you to the 42nd Annual conference of AOGD. What makes this year's conference even more unique than usual is the fact that the organizers have managed to shift the entire 3 day conference so seamlessly onto the digital platform.

Dr Mala, Dr Kanika and Dr Mamta along with their able team are rounding off their preparations in earnest and have an excellent agenda in store.

The theme of this conference- Women's healthcare in the current challenging scenario, is more relevant than ever today, and definitely a discussion that is the need of the hour. This is because, as clinicians, we have been trained over the years to face numerous high risk and emergency situations, but this is one situation that even our teachers were never taught! We have therefore had to make our own path, learning from experience- both our own as well as that of our colleagues, and making the rules as we go along. As a unit, I am proud to say we FOGSIans have done very well.

This conference, with its eminent faculty is set to further strengthen our grasp of this pandemic, by providing detailed and insightful updates on every topic.

I look forward to active and enthusiastic participation from all the delegates.

My best wishes for the success of the conference.

Kind regards

Dr Alpesh Gandhi

Message from Chairperson Board of Management

MESSAGE

I am really pleased to learn that Institute of Obstetrics and Gynaecology, Sir Ganga Ram Hospital is organizing 42nd Annual Conference and 1st E-Conference of AOGD on 30th, 31st October and 1st November 2020. The Theme of the Conference has been aptly chosen as "Women's Health Care in The Current Challenging Scenario". I am also happy to know that the Association of Obstetricians and Gynaecologists of Delhi team of Sir Ganga Ram Hospital, New Delhi is really working hard to organize this unique conference.

Learning is a continuous process and these seminars and annual conferences are really cherished as the learning points of this vast subject. The programme, I have seen is nicely chosen and planned. I am sure the attending delegates and postgraduate students will immensely benefit from this scientific programme.

There are quite of a few of international and senior national faculty members who will enrich this e-conclave immensely. I am sure all the delegates participating in this virtual academic meet will highly benefit.

I wish this e-conference a grand success. I also hope that team AOGD will keep on doing wonderful academic activities in future as well.

(Dr. D.S. Rana)
Chairman
Board of Management

Dr. D. S. RANA
Chairman-Board of Management
Sir Ganga Ram Hospital
New Delhi - 110060

From the Office of the Dean

I am very happy to note that 42nd Annual Conference of Association of Obstetricians and Gynecologist of Delhi is being organized as 1st E- conference from 30th October, 2020. Theme of the conference **"Women's Health Care in the Current Challenging Scenario"** is very apt. COVID pandemic has totally challenged Health Care workers. We are providing health care to all needy patients in an environment which is safe for patients as well as for health care workers. Doctors are overwhelmed with COVID duties and this takes a toll on academic activities. Conducting E-conference with National and International faculties for our young doctors will go a long way in imparting latest knowledge

Team led by Dr. Kanwal Gujral, Dr. Mala Srivastava, Dr. Kanika Jain and Dr. Mamta Dagar have taken the onerous task of organizing this conference. Topics for discussion are very relevant. I wish the team a very successful conference.

Dr Kusum Verma
Dean GRIPMER
Advisor Cytopathology
Sir Ganga Ram Hospital
New Delhi

AOGD President's Message

On behalf of the organizing committee I extend my warm welcome to all the distinguished faculty and the delegates of the 42nd Annual Virtual Conference of AOGD on 30th October, 31st October and 1st November 2020.

This annual conference is a unique virtual, once in a lifetime clinical and scientific event emphasizing on multidisciplinary collaboration. This is a special event where there will be discussion on a plethora of topics. The corona pandemic has taught us many things. It has changed our outlook, our lifestyles, our way of talking, interacting and above all exchanging ideas. During these challenging times our desire to learn and teach continues. We evolved various innovations to fulfill our aim. Hence, the vast virtual annual conference was planned. The program is carefully tailored to address current topics in obstetrics and gynaecology. How corona has changed our practice and how the entire medical faculty has innovated and adapted in these challenging times.

The annual conference starts from the PG activities like quiz, free paper and poster presentation. There are eleven pre-conference and post-conference workshops together with a session on diet and exercise. There are video sessions on variety of endoscopic surgeries by eminent surgeon across the globe. There are Presidential sessions where Presidents of different societies have a platform to present their outlook. There are panel discussions on the burning topics of the day by senior faculty members all over the country. The chairpersons of different committees of AOGD have a session on "Expert speak".

Exciting times are here again. This is an opportunity where we meet our friends (virtually) exchange thoughts and share new ideas with our peers for the ultimate goal of better outcome of our patients. We have invited esteemed experts who are here to present their experience in their respective fields in a crisp and comprehensive manner. The highlights of this conference are the keynote addresses where we have a galaxy of eminent national and international speakers sharing their experience with us. The icing on the cake are the oration by eminent speaker. I am sure everyone will cherish the memories of this scientific bonanza for many years to come.

Thanks giving is a very sacred task of acknowledging and yet balancing the contribution of various personalities in this endeavor. It is also an equally difficult task where one must not forget any one end, and all the same keeping the balance of importance of one person over the other.

I feel privileged that all the AOGD members had confidence in me and my team and hence this mega event became a possibility.

The organization of such an event cannot be accomplished without an active involvement of many personalities. First of all, I must thank madam Dr. S.K. Bhandari, a wonderful person who has always guided us for this endeavor.

It's my pleasure to thank Dr. Indrani Ganguli, our chief advisor and a very experienced personality who has been the source of inspiration for me. She has always been a mentor for me, for recognizing the abilities, promoting and projecting them without hesitation as and when required. I am extremely grateful to Dr. D. S. Rana, Chairman Board of management, Sir Ganga Ram Hospital and Dr. Kusum Verma, Dean GRIPMER for their exceptional support.

I pay my homage to respected Dr. Kanwal Gujral, Dr. Harsha Khullar and Dr. Abha Majumdar. They have been very helpful throughout the preparation of this conference. I am truly

thankful to Dr. Geeta Mediratta, Dr. Chandra Mansukhani, our scientific chairpersons for knitting and crafting this exhaustive scientific program.

I am extremely thankful to Dr. Kanika Jain and Dr. Mamta Dagar who really worked very hard to make this conference see the light of the day. They provided constant tremendous scientific and clinical support. Dr. Kanika Jain did wonder with all the eleven workshops and Dr. Mamta Dagar did magic with the quiz.

I am also grateful to Dr. B. G. Kotwani, Dr. M. Kochhar and Dr. P. Chadha for their advice and blessings in the success of this event. I have been very ably assisted by the very innovative and optimistic treasurer Dr. Shweta Gupta Mittal. Besides, the help also come from Dr. Debashish Dutta, Dr. Punita Bhardwaj, Dr. Sunita Kumar as well as Dr. Niti Tiwari whose reinforcements will be discovered in all spheres of this conference.

I am also deeply indebted to Dr. Ruma Satwik who handled and streamlined the free papers and posters efficiently. We had an overwhelming response and had received 200 free papers and more than 85 e-posters.

I extend my gratitude to Dr. Sharmistha Garg, Dr. Tarun Das, Dr. Gaurav Majumdar, Dr. Sakshi Nayyar, Dr. Ila Sharma and Dr. Ankita Srivastava for their valuable contribution at various stages of preparation for the conference. I am thankful to all my residents as well as my postgraduate students for their efforts of running around giving better stability between patient care and organizational hurdles and very courteous to offer their services with smile.

I shall be doing injustice to fail to accept the support of my staff particularly Mrs. Sarita Kashyap, Mr. Swadesh Kumar, Mrs. Nikki Ghuman, Mrs. Shalu Matta, Mrs. Neha Ahlawat Malik who had put in tremendous efforts in streaming various spheres of activities during the conference preparation.

No event is possible without a generous support from all the sponsors who have contributed in various forms for the success of the conference. There has been a great support from our team of event managers, Mr. Tarun Mathur and Mr. Sumit Ghai. They worked day and night for the success of this conference.

Last but not the least is the unquestioned, unstinted and continuous support that I received from my husband Dr. Arvind Srivastava, my son Dr. Akshit Srivastava, my daughter Dr. Ankita Srivastava and my son-in-law Dr. Jitesh Manghwani. They agreed, gladly to postpone the many social requirements of the family. They understood my absence, even when I was at home for they knew that "after the flight the bird must return to the nest".

We have tried to do the best of our ability to provide a good scientific programme, however success of this conference would now depend upon the response from you all.

We are here to offer our services with all humility. We would rather confess to be wrong if anywhere than arguing when we were wrong.

Thanking you all for gracing the occasion, we hope that your participation will prove to be academically as well as a socially fruitful virtual event to be remembered for years to come.

Long live AOGD!

Dr Mala Srivastava
President, AOGD

From Vice President's & Secretary's Desk

Dr Kanika Jain

Dr Mamta Dagar

Dear Friends,

Warm greetings from AOGD!!!

It gives us immense pleasure to invite and connect with you at the **42nd Annual Conference and 1st E-Conference of AOGD**. The Theme of the Conference has been aptly chosen as **"Women's Health Care In The Current Challenging Scenario".** Through this Conference, we intend to offer a basket of approaches and recent advances to safeguard Women's Health.

While we write this message, we are already in the middle of the flagship event of this year "AOGD Annual Conference". This is indeed a 'once in a lifetime' high point for entire AOGD Secretariat. This has been possible because of the whole hearted support and efforts of all AOGDians in these tough times.

We are happy to share some of the Conference highlights. This year we received record breaking 163 entries in the free communication papers category, 81 E-Posters, 102 Competition Papers out of which 10 finalists are selected, 43 E-Slogan entries, 70 E-Quiz participants and 800+ Conference registrations. To date, we already have close to 400 plus registrations for each of the 11 workshops. Our annual event, though being at Delhi level has a lot of eminent national, international faculties and participants because of the convenience of attending from one's own comfort zones.

We hope this year's AOGD Souvenir will do its best to capture this spirit and bring to you highlights of the work that has been done throughout the year.

Warm regards as always

Dr Kanika Jain
Vice President, AOGD

Dr Mamta Dagar
Secretary, AOGD

Message From the Advisor's


Dr Kanwal Gujral


Dr Harsha Khullar


Dr Abha Majumdar

AOGD under the leadership of President Dr. Mala Srivastava is organizing the first ever virtual conference keeping up with the present Covid times. The conference is an academic feast spread over 15 days including 11 workshops with large involvement of international and national faculty. The theme "Women's Health Care in the Current Challenging Scenario" is very pertinent today. The team SGRH has put in great efforts to make this Congress rich in academic content and practical knowledge. We wish the 42nd Annual Conference a great success!

International Faculty

National Faculty

Dr A G Radhika
Dr A Jyotsna
Dr A Kumar
Dr Abha Majumdar
Dr Abha Sharma
Dr Abha Singh
Dr Abhinibesh Chatterjee
Dr Achla Batra
Dr Akshtha Sharma
Dr Alka Kriplani
Dr Alka Kuthe
Dr Alpesh Gandhi
Dr Amita Jain
Dr Amita Maheshwari
Dr Amita Suneja
Dr Anita Kaul
Dr Anita Rajorhia
Dr Anita S. Anand
Dr Anita Sabharwal Kapoor
Dr Anjali Dabral
Dr Anjali Tempe
Dr Ankita Jain
Dr Anubhuti Rana
Dr Anupama Bahadur
Dr Anupama
Dr Aparna Hegde
Dr Aparna Sharma
Dr Arbinder Dang
Dr Archana Mishra
Dr Archana Verma
Dr Arifa Anwar Elahi
Dr Arpita De
Dr Aruna Nigam
Dr Arvind Kumar
Dr Asha Baxi
Dr Ashok Kumar
Dr Asmita M Rathore
Dr Atul Ganatra
Dr Ayesha Ahmad
Dr Basab Mukherjee
Dr Bharti Maheshwari
Dr Bhaskar Pal
Dr Bidhisha Singha
Dr Bindiya Gupta
Dr Bindiya Jhamb
Dr Bindu Bajaj
Dr C.M. Nagori
Dr Chanchal Singh
Dr Chand Wattal
Dr Chandan Kachru
Dr Chandra Mansukhani
Dr Chandrawati
Dr Charmila Ayyawoo
Dr Chetna A Sethi
Dr Chinmayee Ratha
Dr Chitra Raghunandan
Dr D S Rana
Dr Debasis Dutta
Dr Deepak Goenka
Dr Deepika Meena
Dr Deepti Goswami
Dr Devender Kumar
Dr Dinesh Kansal
Dr Dipti
Dr Divya Pandey
Dr Garima Kachhawa
Dr Gaurav Majumdar
Dr Gauri Gandhi
Dr Geeta Mediratta
Dr Geetendra Sharma
Dr Harsha Khullar
Dr Harvinder
Dr Hephzibha
Dr Himani Agarwal
Dr Indu Chawla
Dr J B Sharma
Dr J C Suri
Dr J Mehta
Dr Jaya Chawla
Dr Jayasree Sunder
Dr Jyothi Unni
Dr Jyoti Bali
Dr Jyoti Bhaskar
Dr Jyoti Meena
Dr Jyoti Sachdeva
Dr Jyotsna Suri
Dr K Aparna Sharma
Dr K D Nayar
Dr K K Roy
Dr Kalpana Apte
Dr Kamal Buckshee
Dr Kamini Rao
Dr Kanika Chopra
Dr Kanika Jain
Dr Kanwal Gujral
Dr Kavita Agarwal
Dr Kiran Aggarwal
Dr Kiran Guleria
Dr Krishna Agarwal
Dr Krishna Gopal
Dr Kuldeep Jain
Dr Lalita Budhwar
Dr Latika Chawla
Dr Latika Sahu
Dr Laxmi Mantri
Dr Leena N Sreedhar
Dr Leena Patankar
Dr Leena Wadhwa
Dr M C Patel
Dr M Sundaraman
Dr Madhavi M Gupta
Dr Madhu Goel
Dr Madhulika Kabra
Dr Madhuri Patil
Dr Mala Srivastava
Dr Malvika Sabharwal
Dr Mamta Dagar
Dr Manish Banker
Dr Manisha Kumar
Dr Manjit Sidhu
Dr Manju Khemani
Dr Manju Puri
Dr Meena Agnihotri
Dr Meeta
Dr Megha
Dr Mitra Saxena
Dr Mohan Kamath
Dr Mohan Regmi
Dr Monika Gupta
Dr Monisha Pradhan
Dr Mrinalini Mani
Dr N B Vaid
Dr Naina Dalvi
Dr Nalini B Pandey
Dr Nandini Bhattacharya

Dr Nandita Dimri
Dr Narayan Jana
Dr Narendra Malhotra
Dr Neelam Aggarwal
Dr Neelam B Vaid
Dr Neelam Redkar
Dr Neena Malhotra
Dr Neera Aggarwal
Dr Neerja Bhatla
Dr Neeti Tiwari
Dr Neha Gupta
Dr Nidhi Bedi
Dr Nidhi Garg
Dr Nidhi Gupta
Dr Nidhi Khera
Dr Niharika Dhiman
Dr Nirmala Agarwal
Dr Nutan Jain
Dr Nuzhat Aziz
Dr P Mangeshikar
Dr P Palaskar
Dr Panchampreet Kaur
Dr Pankaj Garg
Dr Parag Biniwale
Dr Pikee Saxena
Dr Pinkee Saxena
Dr Poonam Kashyap
Dr Poonam Sachdeva
Dr Poonam Shivkumar
Dr Poonam Tara
Dr Poornima J
Dr Pradnya Changede
Dr Pragnesh Shah
Dr Pratima Mittal
Dr Preeti Singh
Dr Priya Bhave
Dr Puneeta Mahajan
Dr Punita Bhardwaj
Dr Pushpa Mishra
Dr Rachna Sharma
Dr Radhika A G
Dr Ragini Aggarwal
Dr Rajesh Taneja
Dr Rama Joshi
Dr Ranjana Sharma
Dr Rashmi Malik
Dr Rashmi Sharma
Dr Ratna Biswas
Dr Reema Bhatt
Dr Reena
Dr Reena Rani
Dr Reena Wani
Dr Reena Yadav
Dr Rekha Bharti
Dr Rekha Mehra
Dr Renu Arora
Dr Renu Mishra
Dr Renu Tanwar
Dr Renuka Chaudhary
Dr Reva Tripathi
Mrs Richa Mayee
Dr Richa Sharma
Dr Riju Chimote
Dr Rinchen
Dr Rinku Sen Gupta
Dr Ritika Bhandari
Dr Ruma Satwik
Dr Rupali Bassi
Dr Rupali Dewan
Dr Rupinder Sekhon
Dr S B Khanna
Dr S K Giri
Dr S N Mukherjee
Dr S P Byotra
Dr S Pandey
Dr S S Trivedi
Dr Sabhyata Gupta
Dr Sabuhi Qureshi
Dr Sadhna Gupta
Dr Sandesh Kade
Dr Sandhya Jain
Dr Sandip Datta Roy
Dr Sangeeta Bhasin
Dr Sangeeta Gupta
Dr Sanjay Patil
Dr Sanjeevani Khanna
Dr Saritha Shamsunder
Dr Saurabh Chawla
Dr Savita Singhal
Dr Seema Goel
Dr Seema Prakash
Dr Seema Singhal
Dr Shailesh Puntambekar
Dr Shakun Tyagi
Dr Shalini Chawla
Dr Shalini Mehrotra
Dr Shalini Rajaram
Dr Shalini Shakarwal
Dr Sharda Jain
Dr Shashi Lata Kabra
Dr Sheeba Marwah
Dr Shelly Arora
Dr Shikha Sharma
Dr Shilpi Nain
Dr Shobha N Gudi
Dr Shweta Mittal Gupta
Dr Shylasree T Surappa
Dr Smriti Agarwal
Dr Sohani Verma
Dr Soma Mitra
Dr Sonia Malik
Dr SP Somashekhar
Dr Srikanthan
Dr Subhash Mallaya
Dr Sudha Prasad
Dr Sumedha Sharma
Dr Sumita Mehta
Dr Sumitra Bachani
Dr Suneeta Mittal
Dr Sunesh Kumar
Dr Sunita Kumar
Dr Sunita Malik
Dr Surveen Ghumman
Dr Sushma Malik
Dr Sushma Sinha
Dr Suyash Naval
Dr Swaraj Batra
Dr Swati Agarwal
Dr Sweta Balani
Dr Tanudeep Kaur
Dr Tanya Buckshee
Dr Tapas Koley
Dr Tripti Saran
Dr Uma Rani Swain
Dr Upma Saxena
Dr Usha Sharma
Dr V P Paily
Dr Vandana Chaddha
Dr Vatsala Dadhwal
Dr Vidya Bandookwala
Dr Vijay Paulraj
Dr Vijay Zutshi
Dr Y M Mala
Dr Yogita Parashar

Scientific Program

Scientific Program

Day 1, Friday, 30th October, 2020 | 01:00 PM-07:00 PM

Time	Topic	Speaker
01:00PM-02:00PM	**INAUGURATION**	
	Master of Ceremony: Dr Neeti Tiwari	
	CHIEF GUEST- Dr Alpesh Gandhi	
	GUEST OF HONOUR- Dr D S Rana & Dr S P Byotra	
02:00PM-03:00PM	**Session 1: ORATION** **Master of Ceremony: Dr Kanika Jain** **Chairpersons : Dr S N Mukherjee, Dr Kamal Buckshee, Dr Abha Singh, Dr Mala Srivastava**	
	SPECIALITY OF OBSTETRICS & GYNECOLOGY THEN AND NOW	**Dr Sunesh Kumar**
03:00PM-04:00PM	**Session 2: VIDEO SESSIONS** **Master of Ceremony: Dr Punita Bhardwaj** **Chairpersons: Dr L Mettler, Dr P Mangeshikar**	
03:00PM-03:10PM	Laparoscopic Sling Surgery - Variety and Perspective	**Dr P Palaskar**
03:10PM-03:20PM	Novel Fluid Management System	**Dr A Kumar**
03:20PM-03:30PM	Laparoscopic Assisted Radical Trachelectomy	**Dr G Mehra**
03:30PM-03:40PM	VVF - Robotic Approach	**Dr M Sundaraman**
03:40PM-03:50PM	Laparoscopic Intricacies of Ureteric Dissection in DIE	**Dr S Pandey**
03:50PM-04:00PM	Enbloc Paraaortic Dissection - Laparoscopic/Laparotomy	**Dr J Mehta**
04:00PM-06:00PM	**Session 3: COMPETITION PAPERS** Master of Ceremony: Dr. Sunita Kumar **JUDGES: Dr N B Vaid, Dr S S Trivedi, Dr Suneeta Mittal, Dr Reva Tripathi**	
06:00PM - 06:30PM	**Session 4 | EXPERTS SPEAK** **Chairpersons: Dr Mamta Dagar, Dr Savita Singhal, Dr Vatsla Dadhwal, Dr Richa Sharma**	
06:00PM-06:10PM	Protocol for Medico-legal Examination of Sexual Assault	**Dr Sushma Sinha**
06:10PM-06:20PM	Vaccination in women	**Dr Seema Prakash**
06:20PM-06:30PM	Understanding PCOS	**Dr Anita Rajorhia**
06:30PM - 07:00PM	**Session 5 | EXPERTS SPEAK** **Chairpersons: Dr Sunita Malik, Dr Col. Reema Bhat, Dr Neeti Tiwari, Dr Ruma Satwik**	
06:30PM-06:40PM	Luteal Phase Support - Are Long Prescriptions Required ?	**Dr Kavita Agarwal**
06:40PM-06:50PM	Conserative Management of Prolapse	**Dr Achla Batra**
06:50PM-07:00PM	Mullerian Anomalies - Fertility Outcome	**Dr Kuldeep Jain**

Day 2, Saturday, 31st October, 2020 | 01:00 PM-07:00 PM

Time	Topic	Speaker
01:00PM-01:30PM	**Session 1: PRESIDENTIAL SESSION Masters of Ceremony: Dr Mala Srivastava & Dr Mamta Dagar Chairpersons: Dr Archana Verma, Dr Rekha Mehra, Dr Neera Agarwal, Dr Anjali Tempe**	
01:00PM-01:10PM	When to shift from IUI to IVF	**Dr Sudha Prasad**
01:10PM-01:20PM	How to make an effective Power Point Presentation	**Dr Sharda Jain**
01:20PM-01:30PM	Women's intimate health - Let's Talk	**Dr Ragini Aggarwal**
01:30PM-01:50PM	Abortion Care in the Current Challenging Scenario	**Dr Mandakini Megh**
02:00PM-03:00PM	**Session 2: FOGSI ORATION Chairpersons: Dr Harsha Khullar, Dr Shalini Rajaram, Dr Ashok Kumar, Dr Renu Arora**	
	WOMEN'S HEALTH CRISIS IN COVID-19 PANDEMIC	**Dr Alpesh Gandhi**
03:00PM-04:00PM	**Session 3: KEYNOTE ADDRESSES Chairpersons: Dr Chandra Mansukhani, Dr Achla Batra, Dr Sanjeevani Khanna, Dr Indu Chawla**	
03:00PM-03:20PM	Laparoscopic Management of Cesarean Complications	**Dr Alka Kriplani**
03:20PM-03:40PM	PPH- New Thoughts on Management	**Dr V P Paily**
03:40PM-04:00PM	Controversies in Management of Tubal Ectopic Pregnancy	**Dr Bhaskar Pal**
04:00PM-06:00PM	**Session 4: PANEL DISCUSSIONS**	
04:00PM-05:00PM	**TOPIC: MENOPAUSAL HORMONE THERAPY- MADE TO ORDER (Case Based Discussion) PANELISTS: Dr Meeta, Dr Parag Biniwale, Dr Neelam Aggarwal, Dr Hephzibha, Dr Srikanthan, Dr Anupama Mane**	**MODERATOR: Dr Jyothi Unni**
05:00PM-06:00PM	**TOPIC: COVID-19 IN PREGNANCY PANELISTS: Dr Sushma Malik, Dr Pradnya Changede, Dr Neelam Redkar, Dr Chand Wattal, Dr Pratima Mittal, Dr Narayan Jana, Dr Chinmayee Ratha**	**MODERATOR: Dr Reena Wani CO-MODERATOR: Dr Naina Dalvi**
06:00PM-06:30PM	**Session 5 | EXPERTS SPEAK Chairpersons: Dr Arbinder Dang, Dr Asmita Rathore, Dr A G Radhika, Dr Renuka Malik**	
06:00PM-06:10PM	Abnormal Placentation and Adverse Obstertic Outcome: Screening, Diagnosis and Treatment	**Dr Manisha Kumar**
06:10PM-06:20PM	Preterm Labour	**Dr Manju Khemani**
06:20PM-06:30PM	Jaundice in Pregnancy - Differential Diagnosis and Management Principles	**Dr Jyotsna Suri**
06:30PM - 07:00PM	**Session 6 | EXPERTS SPEAK Chairpersons: Dr Aparna Sharma, Dr Abha Sharma, Dr Kanika Jain, Dr Anjali Dabral**	
06:30PM-06:40PM	Restructuring Obstetric Practices in the COVID Pandemic : A Journey of Quality Improvement	**Dr Manju Puri**
06:40PM-06:50PM	Vulvar Intraepithelial Neoplasia - Recent Concepts	**Dr Amita Suneja**
06:50PM-07:00PM	Genitourinary Syndrome of Menopause	**Dr Shashi Lata Kabra**

Day 3, Sunday,1st November, 2020 | 01:00 PM-06:30 PM

Time	Topic	Speaker
01:00PM-01:30PM	**Session 1: PRESIDENTIAL SESSION Masters of Ceremony: Dr Geeta Mediratta & Dr Chandra Mansukhani Chairpersons: Dr Anita Sabharwal Kapoor, Dr Kiran Guleria, Dr Ratna Biswas**	
01:00PM-01:10PM	Adolescent PCOS: Resolving Dilemmas	**Dr Kiran Agarwal**
01:10PM-01:20PM	One Stop Treatment for CIN	**Dr Sarita Shamsunder**
01:20PM-01:30PM	Safety Issues in Geriatric Population	**Dr Harsha Khullar**
01:30PM-01:40PM	Safe C section in COVID Scenario	**Dr Milind Shah**
02:00PM-03:00PM	**Session 2: BRIGADIER S D KHANNA ORATION Chairpersons: Dr S B Khanna, Dr Ranjana Sharma, Dr Kanwal Gujral, Dr Sadhna Gupta**	
	REDEFINING INTRAPARTUM CARE BASED ON RECENT EVIDENCE	**Dr S Arul Kumaran**
03:00PM-04:00PM	**Session 3: KEYNOTE ADDRESSES Chairpersons: Dr J B Sharma, Dr Geeta Mediratta, Dr Pratima Mittal**	
03:00PM-03:20PM	Basics of Urogynecology	**Dr Ajay Rane**
03:20PM-03:40PM	Impact of a Stillbirth - A Preventable Tragedy	**Dr Nuzhat Aziz**
03:40PM-04:00PM	Vaccination in Pregnancy Regards	**Dr Jayashree Sundar**
04:00PM-06:00PM	**Session 4: PANEL DISCUSSIONS**	
04:00PM-05:00PM	**TOPIC: ART- MEDICOLEGAL ASPECTS PANELISTS: Dr Manish Banker, Dr Kamini Rao, Dr Leena Patankar, Dr Deepak Goenka, Dr Sohani Verma, Dr Neena Malhotra, Dr Sujata Agarwal**	**MODERATOR: Dr Geetendra Sharma**
05:00PM-06:00PM	**TOPIC: MANAGEMENT OF PREINVASIVE LESIONS OF THE CERVIX (CASE BASED DISCUSSION) PANELISTS:Dr Vijay Zutshi, Dr Gauri Gandhi, Dr Sweta Balani, Dr Seema Singhal, Dr Partha Basu, Dr Theresa Freeman Wang**	**MODERATOR: Dr Neerja Bhatla**
06:00PM-06:30PM	**Session 5: VALEDICTORY FUNCTION**	

REGISTER ONLINE @ www.aogdvirtual.com

Pre-Conference Workshop

Monday 26th October 2020 | 02:00 PM - 06:15 PM

Updating Surgical Skills in Gynaecologic Oncology

Convenor: Dr. Amita Suneja & Dr. Shalini Rajaram
Co-Convenors: Dr. Rashmi Malik & Dr. Bindiya Gupta

Time	Topic	Speaker
02:00PM-02:15PM	**INAUGURATION CEREMONY** **GUEST OF HONOUR -** Dr. Neera Aggarwal (HOD, MAX SSH, Patparganj)	
President's Address - Dr. Mala Srivastava (President AOGD)		
Overview of Workshop - Dr. Amita Suneja (UCMS & GTBH)		
Surgical Training : Quality Indicators - Dr. Shalini Rajaram (AIIMS Rishikesh)		
02:15PM - 03:15PM	**Session 1: FINE TUNING SURGICAL MANAGEMENT OF CERVICAL CANCER** **Chairpersons : Dr. Swaraj Batra (Ex HOD, MAMC & LNH) & Dr. Gauri Gandhi (MAMC & LNH)**	
02:15PM - 02:30PM	Surgical Anatomy of Pelvis	**Dr. Neerja Bhatla (AIIMS, Delhi)**
02:30PM - 02:45PM	Open Radical Hysterectomy	**Dr. Amita Maheshwari (TMH, Mumbai)**
02:45PM - 03:00PM	Radical Trachelectomy	**Dr. Sunesh Kumar (AIIMS, Delhi)**
03:00PM - 03:15PM	**Discussion**	
03:15PM - 04:15PM	**Session 2: MASTERING NODAL DISSECTION** **Chairpersons : Dr. Kiran Guleria (UCMS & GTBH) & Dr. Reena Yadav (LHMC & SKH)**	
03:15PM - 03:30PM	Robotic Pelvic Sentinel Lymph Node Dissection For Gynecologic Cancers	**Dr. Rama Joshi (FMRI, Gurugram)**
03:30PM - 03:45PM	Perfecting Pelvic Lymphadenectomy	**Dr. Bindiya Gupta (UCMS & GTBH)**
03:45PM - 04:00PM	Open Paraaortic Lymphadenectomy	**Dr. SP Somashekhar (MCCC, Bangalore)**
04:00PM - 04:15PM	**Discussion**	
04:15PM - 05:15PM	**Session 3: OPTIMAL CYTOREDUCTION IN ADVANCED OVARIAN CANCER** **Chairpersons : Dr. Neelam B Vaid (Consultant Fortis, Shalimar Bagh) &** **Dr. Sabhyata Gupta (Medanta, Gurugram)**	
04:15PM - 04:30PM	Surgical Approach To A Complex Pelvis	**Dr. Kavita Singh (PBGCC, UK)**
04:30PM - 04:45PM	Total Omentectomy& "Hand-Sewn" Side To Side Small Bowel Anastomosis	**Dr. Shylasree T Surappa (TMH, Mumbai)**
04:45PM - 05:00PM	Peritonectomy: Pelvic and Abdominal	**Dr. Pankaj Garg (AIIMS, Rishikesh)**
05:00PM - 05:15PM	**Discussion**	
05:15PM - 06:15PM	**Session 4: TAILORING SURGERY IN VULVAR CANCER** **Chairpersons : Dr. Saritha Shamsunder (VMMC & SJH) & Dr. Vijay Zutshi (VMMC & SJH)**	
05:15PM - 05:30PM	Groin Sentinel Lymph Node Detection	**Dr. Jason Yap (PBGCC, UK)**
05:30PM - 05:45PM	Reconstructive Surgery For Vulvar Cancer	**Dr. S K Giri (Ex HOD, AHRCC, Cuttack)**
05:45PM - 06:00PM	Robotic VEIL	**Dr. Rupinder Sekhon (RGCIRC, Delhi)**
06:00PM - 06:10PM	**Discussion**	
06:10PM - 06:15PM	**Vote of Thanks : Dr Rashmi Malik**	

Pre-Conference Workshop

Tuesday 27th October 2020 | 12:00 PM - 06:30 PM

Enhancing Surgical Skills In Gynae Endoscopy

Convenor: Dr. Kanika Jain & Dr. Debasis Dutta
Co-Convenors: Dr. Richa Sharma, Dr. Madhu Goel

Time	Topic	Speaker
12:00PM - 12:05PM	Welcome Address	**Dr. Mala Srivastava (SGRH)**
12:05PM - 12:15PM	Introduction to Workshop	**Dr. Mamta Dagar (SGRH)**
Master of Ceremony - Dr Kanika Jain, Dr Mamta Dagar		
Session I - Chairpersons : Dr. Geeta Mediratta, Dr. A Jyotsna, Dr Chandan Dubey(UAE) & Dr. Swati Agarwal		
12:15PM - 12:30PM	Pelvic Anatomy- Avascular Pelvic Spaces	**Dr. Sandesh Kade (Solapur)**
12:30PM - 12:45PM	Energy Sources in Gynae Endoscopy- Then and Now	**Dr. Malvika Sabharwal (JMH)**
12:45PM - 01:00PM	Tips and Tricks - How to Make Laparoscopy Safer	**Dr. Arvind Kumar (New Delhi)**
Session II - Chairpersons: Dr. Kanwal Gujral, Dr. Sharda Jain, Dr. S. S. Trivedi, Dr. Mamta Dagar		
01:00PM - 01:20PM	TLH- A Day Care Surgery	**Dr. Rajesh Modi (Akola)**
01:20PM - 01:40PM	Difficult TLH- How to Handle	**Dr. Vivek Marwah (Max, Saket)**
01:40PM - 02:00PM	Laparoscopic Wertheim's/Radical Hysterectomy - A Step by Step Guide	**Dr. Hafiz Rehman (Kochi)**
Session III - Chairpersons: Dr. Tripti Saran, Dr. Ritu Rana (UK), Dr Jyoti Bhaskar & Dr Nandini Bhattacharya		
02:00PM - 02:20PM	Laparoscopic Myomectomy	**Dr. Tom Kieran Holland (Guys & Thomas Hospital, London)**
HYSTEROSCOPY – BASICS Master of Ceremony : Dr. Richa Sharma, Dr. Madhu Goel **Session IV - Chairpersons: Dr. Chandra Mansukhani, Dr. Himani Agarwal, Dr. Anita S. Anand, Dr. Sharmistha**		
02:20PM - 02:30PM	Principles of Hysteroscopy	**Dr. Manjit Sidhu (Bhatinda)**
02:30PM - 02:40PM	Hysteroscopy Vs 3D USG For Identification of Uterine Pathologies	**Dr. Narendra Malhotra (Agra)**
HYSTEROSCOPY - SURGICAL TECHNIQUES **Session V - Chairpersons: Dr. Renu Mishra, Dr. Ruma Satwik, Dr. Surveen Ghumman, Dr Seema Gupta**		
02:40PM - 02:50PM	Septal Resection; When & How Far	**Dr. Richa Sharma (GTB)**
02:50PM - 03:00PM	Asherman's Syndrome: Current Treatment Plan & Follow Up	**Dr. Pragnesh Shah (Ahmedabad)**
03:00PM - 03:20PM	Hysteroscopic Myomectomy & Morcellation: Dealing Safely	**Dr. Sergio Haimovich (Spain)**
COMPLICATIONS OF HYSTEROSCOPY - TIPS & TRICKS **Session VI - Chairpersons: Dr. Nidhi Khera, Dr. Sabuhi Qureshi,Dr Neeti Tiwari, Dr. Anupama Bahadur**		
03:20PM - 03:30PM	How to Avoid	**Dr. K .K Roy (New Delhi)**
03:30PM - 03:45PM	How to Tackle	**Dr. Sandip Datta Roy (Thrissur)**
Master of Ceremony - Dr Kanika Jain, Dr Mamta Dagar **Session VII - Chairpersons : Dr. Harsha Khullar, Dr. Sanjeevani Khanna, Dr. Laxmi Mantri, Dr Tarun Das**		
03:45PM - 04:05PM	Laparoscopic V- Note Surgery- New Minimally Invasive Scarless Surgery	**Dr. Suyash Naval (Maharashtra)**
04:05PM - 04:25PM	Various Techniques of Laparoscopic Vaginoplasty	**Dr. A Chatterjee (Calcutta)**
04:25PM - 04:45PM	Laparoscopic Sentinel Lymph Node Mapping	**Dr. Dinesh Kansal (BLK Hospital)**
04:45PM - 05:15PM	Complications in Laparoscopic Surgeries- Learn from the Expert	**Dr. Shailesh Puntambekar (Pune)**
Session VIII - Chairpersons: Dr. Subhash Mallaya, Dr. Sabhyata Gupta, Dr Shweta M Gupta		
05:15PM - 05:55PM	**PANEL: SURGICAL MANAGEMENT OF ENDOMETRIOSIS PANELISTS: Dr. Nutan Jain (Muzaffar Nagar) , Dr. Sanjay Patil (Ahmedabad), Dr. Punita Bhardwaj (SGRH), Dr. D Dutta (SGRHl)**	**MODERATORS: Dr. Manju Khemani (Max, Saket), Dr. Madhu Goel (La-Femme)**
Session IX - Chairpersons: Dr Kanika Jain, Dr Jyoti Bali, Dr Lalita Budhwar,Dr. Panchampreet Kaur		
05:55PM - 06:25PM	New Developments and Strategies In The Management of Severe Endometriosis-"The Intelligent Light"	**Dr. Ceana Nezhat (Atlanta, USA)**
06:25PM - 06:30PM	**Vote of Thanks : Dr. Kanika Jain (Vice President AOGD)**	

Pre-Conference Workshop

Wednesday 28th October 2020 | 09:30 AM - 01:30 PM

Medico-Legal Aspects in Obstetrics and Gynaecology

Convenor: Dr. Asmita M Rathore, Dr. Deepti Goswami, Dr. Niharika Dhiman

Time	Topic	Speaker
9:30AM - 09:35AM	Welcome Note	**Dr. Asmita M Rathore**
Chairpersons : Dr. Gauri Gandhi, Dr. Pikee Saxena & Dr. Nalini B Pandey		
09:35AM - 10:00AM	Consent and Counseling - Role Play	**Dr. Devender Kumar & Dr. Niharika Dhiman**
Chairpersons : Dr. Vijay Zutshi, Dr. Poonam Sachdeva, & Dr. Rachna Sharma		
10:00AM - 10:15AM	Family Planning Services - Provision and Penalties	**Dr. Sumita Mehta**
Chairpersons : Dr. Kanwal Gujral, Dr. Krishna Agarwal & Dr. Shakun Tyagi		
10:15AM - 10:30AM	Medicolegal Concerns in Fetal medicine	**Dr. Sangeeta Gupta**
10:30AM - 10:45AM	**Discussion**	
10:45AM - 11:30 AM	**PANEL DISCUSSION: MEDICOLEGAL ASPECTS IN OBSTETRICS AND GYNAECOLOGY** **PANELISTS: Dr. Indu Chawla, Dr. Jyotsna Suri, Dr. Poonam Kashyap, Dr. Rachna Agarwal, Dr. Garima Kachhawa, Dr. Tapas Koley**	**MODERATOR : Dr. Deepti Goswami**
Chairpersons : Dr. Madhavi M Gupta, Dr. Preeti Singh & Dr. Reena Rani		
11:30AM- 11:45AM	Examination of Survivor	**Dr. Chetna A Sethi**
Chairpersons : Dr. Y M Mala, Dr. Latika Sahu & Dr. Nidhi Garg		
11:45AM - 12:00PM	POCSO Act - Case Based Scenarios	**Dr. Bidhisha Singha**
Chairpersons : Dr. Reena Yadav, Dr. Sangeeta Bhasin & Dr. Shalini Shakarwal		
12:00PM - 12:15PM	Recording of MLC	**Dr. Monisha Pradhan**
12:15PM - 12:30 PM	**Discussion**	
12:30PM - 1:15 PM	**PANEL DISCUSSION: ART AND SURROGACY** **PANELISTS: Dr. Surveen Ghumman, Dr. K D Nayar, Dr. Shikha Sharma, Dr. Leena Wadhwa, Dr. Pushpa Mishra, Mrs Rucha Mayee**	**MODERATORS : Dr. Anjali Tempe & Dr. Renu Tanwar**
1:15PM - 1:30PM	**Vote of Thanks**	

Pre-Conference Workshop

Wednesday 28th October 2020 | 03:00 PM - 07:00 PM

Revisiting IUI in the Era of IVF

Convenor: Dr. Shweta Mittal Gupta
Co-Convener: Dr. Neeti Tiwari, Dr Kavita Agarwal

Time	Topic	Speaker
03:00PM - 03:05PM	Welcome & Introduction	**Dr. Shweta Mittal**
Session 1 **Chairpersons: Dr. Sonia Malik, Dr Mala Srivastava, Dr Kavita Agarwal, Dr. Surveen Ghumman**		
03:05PM - 03:25PM	Revisiting IUI In The Era Of IVF	**Dr. Abha Majumdar**
03:25PM - 03:45PM	The Art and Science of Ovarian Stimulation for IUI	**Dr. Gulam Bahadur (UK)**
03:45PM - 04:05PM	Fine-Tuning of IUI to Optimize its Success	**Dr. Mohan Kamath**
04:05PM - 04:15PM	**Audience Interaction**	
Session 2 **Chairpersons : Dr Kanika Jain, Dr. Jyoti Bali, Dr. Shalini Chawla**		
04:15PM - 04:30PM	Medicolegal Aspects of IUI	**Dr. Tanya Buckshee**
04:30PM - 04:45PM	Luteal Phase Support After IUI Practical Approach	**Dr. Rashmi Sharma**
04:45PM - 04:50PM	**Audience Interaction**	
04:50PM - 06:00PM	**Session 3 - PANEL DISCUSSION** : CASE BASED SCENARIOS IN OVARIAN STIMULATION AND IUI **PANELISTS:** Dr. C.M. Nagori, Dr. Manish Banker, Dr. Madhuri Patil, Dr. Priya Bhave, Dr. Leena Wadhwa, Dr. Pikee Saxena	**MODERATORS:** **Dr. Shweta Mittal Gupta &** **Dr. Neeti Tiwari**
Session 4 - VIDEO SESSIONS **Chairpersons: Dr. Asha Baxi, Dr Mamta Dagar, Dr. Rupali Bassi**		
06:00PM - 06:20PM	Steps to Optimize IUI Outcomes in the Andrology Lab – (Demonstration of Semen Preparation)	**Dr. Gaurav Majumdar**
06:20PM - 06:40PM	Demonstration of IUI Procedure and Difficult IUI	**Dr. Ruma Satwik**
06:40PM - 06:50PM	**Audience Interaction**	
06:50PM - 07:00PM	Take Home Message from the Workshop	**Dr. Shweta Mittal**
	Vote of Thanks	**Dr. Neeti Tiwari**

Pre-Conference Workshop

Thursday 29th October 2020 | 02:00 PM - 05:00 PM

CTG: Basics to Advanced

Convenor: Dr. Reva Tripathi
Co- Convenor : Dr Aruna Nigam

Organizing Committee Members : Dr Neha Gupta, Dr Arifa Anwar Elahi, Dr Sumedha Sharma, Dr Arpita De, Dr Nidhi Gupta

Time	Topic	Speaker
2:00PM - 2:10PM	**OVERVIEW OF CTG**	**Dr. Reva Tripathi**
Session 1: BASICS OF CTG		
2:10PM-2:20PM	Physiology of Acid Base Balance	**Dr. Shelly Arora**
2:20PM -2:30PM	Obstetrician and CTG	**Dr. Nadia Khursheed**
2:30 PM -2:40PM	**Discussion**	
Session 2: INTERPRETATION		
2:40PM -2:55PM	DR C BRAVADO Approach to CTG	**Dr. Ayesha Ahmad**
2:55PM -3:10PM	How to Classify CTG	**Dr. Shalini Mehrotra**
3:10PM -3:25PM	CTG in Special Situations	**Dr. Chanchal**
3:25PM -3:40PM	**Discussion**	
Session 3: ADVANCES IN CTG		
3:40-3:55PM	cCTG/STAn	**Dr. Smriti Agarwal**
3:55-4:10PM	Cord Sampling and Correlations	**Dr. Nidhi Bedi**
4:10-4:20PM	**Discussion**	
Session 4		
4:20PM-5:00PM	**CASE BASED PANEL DISCUSSION** **PANELISTS: Dr. Rinku Sen Gupta, Dr. Shakun Tyagi , Dr. Jayasree Sunder, Dr. Neha Gupta & Dr. Bindiya Jhamb**	**MODERATORS :** **Dr Aruna Nigam &** **Dr Arpita De**

Post-Conference Workshop

Monday 02nd November 2020 | 09:30 AM - 01:30 PM

Fetal Medicine- Care of Fetus Across All Trimesters

Convenor: Dr. Sunesh Kumar (AIIMS), Dr Vatsla Dadhwal
Co-Convenors: Dr Aparna Sharma, Dr Anubhuti Rana

Time	Topic	Speaker
	PANEL DISCUSSION : THE SCREENING CONUNDRUM	
9:30 AM – 10:30 AM	Sonographic Clues To Aneuploidy And Beyond In The First Trimester	**MODERATORS : Dr. Chinmayee Ratha & Dr Akshtha Sharma**
	Unravelling Biochemical Screening and NIPT	
	PANELISTS: Dr. Madhulika Kabra, Dr. Nandita Dimri, Dr. Krishna Gopal, Dr. Sumitra Bachani, Dr. Vandana Chaddha, & Dr. Ritika Bhandari	
10:30 AM- 10.45 AM	**INAUGURATION**	**Dr. Sunesh Kumar, Dr. Mala Srivastava & Dr. Neerja Bhatla**
10.45 AM -11.25 AM	CONSENSUS TO CONTROVERSIES Chairpersons **:** Dr. KK Roy & Dr. Jyoti Meena	**Dr. Sangeeta Gupta & Dr. Reema Bhatt**
11:25 AM – 12:30 PM	**PANEL CASE BASED DISCUSSION ON FETAL GROWTH** **PANELISTS : Dr. Anita Kaul, Dr. Kiran Guleria, Dr. Kanwal Gujral, Dr. Anubhuti Rana, Dr. Poonam Tara**	**MODERATORS : Dr. Vatsla Dadhwal & Dr. Chanchal Singh**
12:30 PM - 1:30 PM	Quiz : Approach to Common Congenital Anomalies	**Dr. Aparna Sharma, Dr. Jaya Chawla, Dr. Latika Chawla & Dr. Rinchen**

Post-Conference Workshop

Monday 02nd November 2020 | 03:00 PM - 06:15 PM

Management of PPH

Convenor: Dr. Shashi Lata Kabra Maheshwari; Dr. Leena N Sreedhar
Co-Convenor: Dr. Yogita Parashar

Experts : Dr. Sharda Jain (Secretary General DGF),
Dr. Sanjeevani Khanna (Chairperson DGF NORTH) &
Dr. Mitra Saxena (Chairperson Elect Practical Obst. Committee FOGSI)

Time	Topic	Speaker
INAUGURATION BY GUEST OF HONOUR : Dr. Alpesh Gandhi (President, FOGSI)		
Chief Guest : Dr. Ragini Aggarwal (VP, FOGSI) & Dr. Mala Srivastava (President, AOGD)		
03:00PM - 04:00PM	**Session 1**	
03:00PM - 03:30PM	PPH - Nightmare to Expertise	**Dr. Shashilata Kabra**
03:30PM - 03:40PM	Blood Component Therapy in PPH	**Dr. Pinkee Saxena**
03:40PM - 03:50PM	Uterine Balloon Therapy	**Dr. Leena Sreedhar**
03:50PM - 04:00PM	Non Pneumatic Antishock Garment (NASG)	**Dr. Sushma Sinha**
04:00PM - 06:00PM	**Session 2 - PPH Drill**	
04:00PM - 04:10PM	**Station 1** NASG	**Dr. Sushma Sinha**
04:10PM - 04:20PM	**Station 2** Assessment of Blood Loss in PPH	**Dr. Yogita Parashar**
04:20PM - 04:40PM	**Station 3** Medical Management of PPH Demonstration of PPH Kit	**Dr. Soma Mitra & Dr. Harvinder**
04:40PM - 05:10PM	**Station 4** Uterine Balloon Tamponade	**Dr. Leena Sreedhar**
05:10PM - 06:00 PM	**Station 5** Uterine Compression Sutures IIAL ligation	**Dr. Shashi L Kabra**
06:00PM - 06:15PM	**INTERACTION WITH FACULTY**	

Post-Conference Workshop

Tuesday 03rd November 2020 | 09:00 AM - 01:00 PM

Tackling Unmet Need For FP Services In Times of COVID-19

Convenor : Dr. Mrinalini Mani
Co-ordinator : Dr. Shobha N Gudi, Chairperson, Family Welfare Committee, FOGSI

Time	Topic	Speaker
GUEST OF HONOUR : Dr. Alpesh Gandhi, Dr Ragini Aggarwal & Dr Mala Srivastava		
Comperes : Dr. Riju Chimote & Dr. Kavita Agarwal		
09:00AM - 10:00AM	**Session 1 : EXPANDING THE BASKET OF CHOICE Chairpersons : Dr. Poonam Shivkumar & Dr. Meena Agnihotri**	
09:00 AM - 09:15 AM	Medical Eligibility Criteria : Optimizing the Implementation	**Dr. Radhika A G**
09:15 AM- 09:30 AM	Ensuring Reach to the Unreached in Public Sector	**Dr. Jyoti Sachdeva**
09:30 AM - 09:45 AM	Updates in Contraception	**Dr. Basab Mukherjee**
09:45 AM - 10:00 AM	Fine Tuning Counseling : The Critical Factor	**Dr. Mrinalini Mani**
10:00AM - 11:00AM	**Session 2 - KEY NOTE ADDRESSES - MOVING FORWARD : LEVERAGING PARTNERSHIPS FOR BETTER IMPLEMENTATION OF FP SERVICES Chairpersons : Dr. Chandrawati, Dr. Ragini Aggarwal, & Dr. Atul Ganatra**	
10:00 AM - 10:15 AM	FOGSI Vision	**Dr. Alpesh Gandhi**
10:15 AM - 10:30 AM	Global Perspective	**Dr. Ben Bellows**
10:30 AM - 10:45 AM	NGO Perspective	**Mr. Vijay Paulraj**
10:45 AM- 11:00 AM	**Interaction**	
11:00AM - 12:00PM	**Session 3 : VITAL AREAS OF PRACTICE Chairpersons : Dr. Usha Sharma & Dr. Puneeta Mahajan**	
11:00 AM - 11:15 AM	Safe Abortion : The Ideal Method	**Dr. Bharti Maheshwari**
11:15 AM - 11:30 AM	MTP Act and its PITFALLS	**Dr. M C Patel**
11:30 AM - 11:45 AM	Adolescent Contraception : Protecting the Future	**Dr. Chandan Kachru**
11:45 AM - 12:00 PM	Benefits Beyond Contraception	**Dr. Charmila Ayyawoo**
	Session 4	
12:00 PM - 01:00PM	**PANEL DISCUSSION : INCREASING MET NEEDS FOR FP - INVOLVING COMMUNITY / HEALTHCARE PROVIDERS / DIGITAL PLATFORM AND FOGSI I CARE CLINICS PANELISTS : Dr. Neelam, Dr. Poornima J, Dr. Alka Kuthe, Dr. Sushma Sinha, Dr. Kalpana Apte, Dr. Saurabh Chawla & Dr. Anita Rajorhia**	**MODERATOR : Dr. Shobha N Gudi**

Post-Conference Workshop

Wednesday 04th November 2020 | 09:15 AM - 01:30 PM

Critical Care Obstetrics

Advisor : Dr Pratima Mittal
Convenor: Dr. Jyotsna Suri
Co- Convenor : Dr Rekha Bharti
Organizing Secretary : Dr Sheeba Marwah

Time	Topic	Speaker
09:15AM - 09:30AM	Introduction to Workshop and Welcome Address	**Dr. Pratima Mittal, Dr. Anjali Dabral**
	Session 1 : INAUGURAL SESSION Chairpersons : Dr. Mala Srivastava, Dr. Rupali Dewan & Dr. Renu Arora	
09:30AM - 10:00AM	Why Women Should Become Critically Ill- Pre-Conceptional Care As Relevant to High Risk Pregnancy	**Dr. Alpesh Gandhi, FOGSI President**
	Session 2: OBSTETRICS CCU ROUND- CASE BY CASE DISCUSSION	
10:00AM - 10:25AM	Oxygen Therapy including NIV	**Dr. Archana Mishra EXPERT: Dr. Pratima Mittal**
10:25AM - 10:50AM	ABG & Bicarbonate Therapy	**Dr. Niharika Dhiman EXPERT: Dr. Jyotsna Suri**
10:50AM - 11:15AM	Fluid Management in Shock & Vasopressors	**Dr. Monika Gupta EXPERT: Dr. Rekha Bharti**
	Session 3 : KEY NOTE ADDRESS Chairpersons : Dr. Vijay Zutshi, Dr. Anjali Dabral, Dr. Bindu Bajaj	
11:15AM - 11:45AM	Acute Respiratory Failure in Pregnancy- What the Obstetrician Should Know	**Dr. J C Suri**
	Session 4: PANEL DISCUSSION	
11:45AM - 12:30PM	**PANEL DISCUSSION : DIABETIC KETOACIDOSIS, PERIPARTUM CARDIOMYOPATHY PANELISTS: Dr. Sunita Malik, Dr. Manju Puri; Dr. Asmita Rathore, Dr. Kiran Guleria, Dr. Upma Saxena, Dr Anita Rajorhia**	**MODERATORS: Dr. Jyotsna & Dr. Sheeba**
	Session 5: VIDEO SESSIONS	
12:30PM - 12:55PM	Management of PPH	**EXPERTS: Dr Divya Pandey (Medical Management) & Dr. Achla Batra (Surgical Management)**
12:55PM - 01:20PM	Resuscitation of Pregnant Woman (Dr. Dipti, Dr. Ankita Jain, & Dr. Megha)	**EXPERTS: Dr. Shipra Aggarwal (Resuscitation) & Dr. Rekha Bharti (Perimortem cesarean Section)**
01:20PM - 01:30PM	**AUDIENCE INTERACTION**	**Dr. Sheeba Marwah**

Post-Conference Workshop

Thursday 05th November 2020 | 10:00 AM - 02:00 PM

Care Bundle for Multiple Pregnancies

Convenor: Dr.Manju Puri, LHMC
Co-Convener: Dr Manisha Kumar

Organizing Secretaries: Dr Shilpi Nain/Dr Deepika Meena
Joint Secretary: Dr Kanika Chopra

Time	Topic	Speaker
10:00 AM - 10:10 AM	Introduction to the Workshop	**Dr. Manju Puri**
Session 1 : ANTEPARTUM CARE Chairpersons : Dr. SS Trivedi, Dr. Geeta Mediratta		
10:10 AM - 10:30 AM	First Trimester Care: More to it than Chorionicity	**Dr. Anita Kaul**
10:30 AM - 10:50 AM	Screening for Aneuploidy in Multiple Gestations: Challenges and Options	**Dr. Chanchal Singh**
10:50 AM - 11:10 AM	Antenatal Care: Singleton Vs Multiple Pregnancy	**Dr. Kiran Aggarwal**
11:10 AM - 11:30 AM	Situations Requiring Foetal Medicine Interventions: Red Flags	**Dr. K Aparna Sharma**
11:30 AM - 11:40 AM	Picture Quiz	**Dr. Ratna Biswas**
Session 2 : INTRAPARTUM CARE Chairpersons : Dr. Abha Singh, Dr. Pikee Saxena		
11:40 AM - 12:00 PM	Delivery Preparedness: When, How & by Whom?	**Dr. Reena**
12:00 PM - 12:20 PM	Delivery in Twins: Honing the Art	**Dr. Shilpi Nain & Dr. Kanika Chopra**
12:00 PM - 12:30 PM	Picture Quiz	**Dr. Deepika Meena**
Session 3 : POSTPARTUM CARE Chairperson : Dr Usha Gupta, Dr Prabha Lal		
12:30 PM - 12:50 PM	Postpartum Challenges	**Dr. Jyoti Bhaskar**
12:50 PM - 01:00 PM	Picture Quiz	**Dr. Deepika Meena**
1:00 PM - 02:00 PM	**PANEL DISCUSSION - MANAGEMENT TIGHT SPOTS: CASE BASED DISCUSSION MANAGEMENT DILEMMAS PANELISTS: Dr. Sangeeta Gupta (MAMC), Dr. Vatsala Dadhwal,Dr. Nandita Dimri, Dr. Reema Bhatt, Dr. Sumitra Bacchani**	**MODERATOR: Dr. Manisha Kumar**
	Vote of Thanks	**Dr. Shilpi Nain**

Post-Conference Workshop

Friday 06th November 2020 | 03:00 PM - 06:00 PM

Urogynaecology

Convenor: Dr. Amita Jain
Co-Convenor: Dr. Tanudeep Kaur

Time	Topic	Speaker
03:00PM - 03:10PM	Welcome Address	**Dr. Amita Jain New Delhi, India**
03:10PM - 03:20PM	Introduction to Faculty	**Dr. Tanudeep New Delhi, India**
03:20PM- 03:40PM	Lessons learnt in COVID times- Defining "new" Normal in Urogynecological Practise	**Dr. Ranee Thakar London, UK**
Chairpersons : Dr. Nirmala Agarwal, Dr. J B Sharma		
03:40PM - 04:00PM	Clinical approach to a case of incontinence to choose right Management	**Dr. Jagdish Gandhi Hull, UK**
Chairpersons : Dr. Ranjana Sharma, Dr. Ragini Agarwal		
04:00PM - 04:20PM	Undesired consequences of Pelvic Floor Surgeries: Prevention & Treatment	**Dr. G. Willy Davila, Cleveland Clinic, USA**
AOGD- GIBS JOINT SESSION Chairpersons : Dr. Aparna Hegde, Dr. Uma Rani Swain		
04:20PM - 04:40PM	Confounded by Pelvic Pain- What Should be My Approach to Deal	**Dr. Mauro Cervigni, Rome, Italy**
Chairpersons : Dr. Rajesh Taneja, Dr. Vidya Bandookwala		
04:40PM - 05:20PM	**PANEL DISCUSSION - PRACTICAL APPLICATION OF URODYNAMICS IN UROGYNECOLOGY AND ITS IMPACT ON MANAGEMENT PANELISTS: Dr. Aparna Hegde, Dr. Mohan Regmi, Dr. Geeta Mediratta, Dr. Sandhya Jain**	**MODERATOR: Dr. Amita Jain, New Delhi, India**
05:20PM - 05:40PM	Basics of "Biofeedback"- When & How!!	**Dr. Bary Berghmans, Maastricht Neatherland**
Chairpersons: Dr. Achla Batra, Dr. Meera Raghwan		
05:40PM - 06:00PM	**Vote of thanks**	**Dr. Achla Batra, New Delhi, India**

Orations

Speciality of Obstetrics and Gynaecology: Then and Now

Sunesh Kumar
Past President AOGD, HOD, Obstetrics and Gynaecology, AIIMS, New Delhi

Greetings to all members of AOGD!

My special thanks to AOGD office bearers (2020-21). I began my career in the speciality in 1979 when I was selected for MD course at AIIMS, New Delhi. That was also the time when first IVF baby was borned in UK-a great leap forward in the field of Infertility Management.

In my presentation I want to recall changes that have occurred in the field of Infertility Management, Endoscopy in Obstetrics and Gynaecology; Cancer Diagnosis and Management and Changes in the Practice of Obstetrics over the last 40 years.

Infertility Management

We have travelled a long distance from managing cases of Infertility especially tubal block from prescribing anti-tubercular drugs, to perform tubal micro surgery to advising adoption to present day scenario of raising hopes for a large number of women through IVF-ET programme. In the past, male factor infertility was a hopeless area but with TESA and ICSI, there is a hope for such couples with male factor infertility. IVF-ET has also raised hopes for cases of unexplained infertility, PCOD related infertility and women with "Poor Ovarian Reserve"

Endoscopy in Gynaecology

Although laparoscopic tubal sterilization was introduced in 1972 but in initial years we remained limited to diagnostic laparoscopies. In 1990's we witnessed remarkable use of endoscopy by General Surgery colleagues. Great efforts by some of pioneering gynaecologist introduced operative laparoscopies and operative hysteroscopies in our speciality. As of now a large number of surgical procedures in gynaecology are being performed endoscopically. This has helped patients to resume their activities early with markedly reduced post operative pain. We also witnessed laparoscopy hysterectomies passing through various phases, NDVH, Laparosocpic Assisted Vaginal hysterectomies to Total Laparoscopic Hysterectomies to Laparoscopic Radical Hysterectomies.

Gynae Cancers

With changing times we have witnessed changes in the patterns of gynaecological cancers and their management. Cervical cancer now occupies second position after breast cancer in India. Availability of pap smear, liquid based cytology, HPV testing and improvement in colposcopy has increased diagnostic facilities. Although we continue to see large number of advance cancer cervix cases, we are hopeful that like rich countries we will witness a sharp decline in invasive cancers of cervix. Endometrial cancer has become a common cancer in Indian Women due to increasing life span, economic prosperity. Ovarian cancer continues to remain as lethal in spite of advances in surgical management and newer drugs.

What we need in the field of gynaecological cancers is easy availability of both diagnostic facilities and timely and adequate treatment nearer to patients home.

Obstetrics Services

We all have witnessed a huge change in our obstetric services. Whereas in 1980's caesarean sections were fewer, making important headlines during clinical rounds to the present day scenario where 50% or more deliveries taking place by caesarean section. Use of Forceps and Vacuum have almost disappeared with very few having expertise of using them. Placenta Percreta Syndrome has shaken all of us with tremendous risk to life of women and is related to increased caesarean section rates.

Emerging Subspecialities

We have all witnessed newer subspecialties such as Fetal Medicine, Gynae Oncology, Urogynaecology, Gynae Endocrinology and Reproductive Medicine emerging. A number of institution already run training courses in the subspecialties. It looks like need of the hour.

Maternal Mortality

Due to concerted efforts of everybody we have seen a sharp decline in maternal deaths but we are still for away from our goal. We continue to contribute 25% of global burden of maternal deaths. We have to move in this field and move fast.

I thank all the AOGD members and our seniors for having reposited faith in me as AOGD President.

I wish all my AOGD members a bright Career.

Redefining Intrapartum Care based on Recent Evidence

S Arulkumaran

Professor Emeritus of Obstetrics and Gynaecology, St George's University of London

There is a global trend in rising CS rate. Based on Robson's criteria most CSs are attributed to group 1. Nulliparous women with singleton cephalic pregnancy = >37 weeks in spontaneous labor; Group 2. Nulliparous women with singleton cephalic pregnancy => 37weeks who either had labor induced or delivered by CS before labor and group 5. All multiparous women, with at least one previous uterine scar and a single cephalic delivery = > 37 weeks. If one were to reduce the CS rate then we need to tackle the primary CS rate which is the main cause for escalating CS. This we believe is because of us misunderstanding Friedman's paper on cervical dilatation patterns. In his series he reported series of the first 100 cases of which only 29 had spontaneous deliveries; 68 forceps; 1 CS in 2nd stage; 1 frank breech; 1 multiple pregnancy; 4 Pitocin induction; 15 augmentation; 22 caudal anesthesia and 1 early neonatal death. These are not normal cases. Philpott and O'Driscoll adapted one cm per hour as the expected labor progress in the active stage. WHO technical working group (1987) reviewed all partographs and suggested that left of alert line: no action and Right of the alert line to transfer if labour was in a peripheral unit and no specific action in Central unit. If it reaches or crosses the action line: review for augmentation, termination, or supportive care. For prolonged latent phase review by medical staff was suggested. Contrary to the WHO recommendation a study of 1329 nulliparous women with a term, singleton, vertex presentation after spontaneous onset of labor by Zhang et.al. in 2002 showed slow progress up to 5 to 6 cms (latent phase) and then a rate of cervical dilatation of one cm per hour. Similar observations were repeated by Zhang et.al. in larger studies. To evaluate the different claims and to achieve the ultimate goal of reduction in adverse birth outcomes by improving the quality of intrapartum care the WHO conducted a facility-based prospective cohort study among African women in labor – the BOLD study- Better Outcome in Labor Difficulties. The purpose was also for the development of a Simplified, Effective, Labor Monitoring-to-Action ("SELMA") tool.

The sample size was 10,000 women. This showed whether labors progressed normally or abnormally, morbidity outcomes were seen in both groups. This study and systematic reviews on labor made the WHO to conclude that in managing labor the following should be considered; 1. **Respectful care;** Women expressed the need for supportive and respectful care during labor, including empathy and emotional support from providers; 2) **Good Communication;** Women want providers to take the time to communicate slowly and clearly with them so that they are empowered to make decisions about their care; 3) **Labor companion;** Most women would prefer to have their husband or a female relative with them because they felt lonely and scared; 4) **Essential physical resources;** Women thought that hospitals were dirty, especially the patient toilets. Women described the waiting area of the hospital as overcrowded and overflowing, where women are lying on the floor waiting to be seen by providers; 5) **Actionable information system;** Providers expressed frustration when medical records were not completed in a timely fashion. Currently there is ongoing research to explore these concepts with the use of 'Labour care guide' to see whether better outcome could be achieved. Another reason for rising CS rate is non-reassuring FHR patterns. Evidence from INFANT study would be reviewed and suggestions made for research into machine learning to improve outcome and reduce CS rate. The use of modern invention of heat stable long acting carbetocin for prevention and use of tranexamic acid for early treatment of PPH would be discussed.

Keynotes

PPH - New thoughts on management

V P Paily
MD, FRCOG, Senior Consultant and HOD, Deptmt of O & G, Rajagiri Hospital, Aluva, Kerala

Obstetricians and allied specialists are battling to address the problem of postpartum haemorrhage (PPH) which still remains the leading cause of maternal deaths across the globe. Naturally there are new thoughts on several aspects in the management of PPH. Some of the old concepts are challenged or revised.

The first concept to be abandoned is the thought that we have the "golden two hours" to save a woman from dying due to PPH. In some of the cases there will be only few minutes available. If prompt action is not taken in minutes, we may lose the battle.

The new thoughts may be divided under the following heads:-

1. Prevention
2. Diagnosis
3. Steps to arrest the bleeding immediately
4. Relook at established procedures to manage PPH
5. The approach to placenta accreta spectrum (PAS).

Prevention

Active management of third stage of labour(AMTSL) has been clearly defined now. Oxytocin is recognised as the best oxytocic agent. In Kerala we have specified the AMTSL as follows –

1. Soon after delivery of the fetus (after making sure that there is no more fetus to be delivered) 5 units oxytocin diluted to 5 ml with saline is given intravenously taking 5 seconds.
2. Inject 10 units oxytocin Intra Muscularly.
3. In those with predilection for PPH, start a drip with 20 units oxytocin in 500 ml of saline and give at the rate of 4 ml per minute (60 drops /mt). This should last for about two hours.
4. In patients showing signs of excessive bleeding give injection methergin 0.2mg or prostodin 125 microgm, IM after ruling out contra indications. We do not ordinarily use intravenous methergin
5. The same medications may be used during caesarean delivery also.

We recommend delayed cord clamping – after about one minute-- if the baby is active and crying at birth.

We recommend removal of placenta by cord traction without waiting for the classical signs of separation of the placenta but always after making sure that there is a contracted uterus felt supra pubically. While giving cord traction, the contracted uterus is pushed cranially. If placenta is not yielding, repeat the procedure after about ten minutes. If placenta is not delivered in 30 minutes, manual removal will be attempted.

4th Stage of labour

The 4th stage is defined as two hours after complete delivery of the placenta. We insist that in addition to recording pulse and blood pressure, the following points also should be checked and recorded every half an hour for two hours.

1. Is the uterus contracted or not.
2. Is there any excessive bleeding seen between the thighs on pressing the contracted uterus down.

We have these four points printed on the reverse side of the partogram in the form of a table.

If the uterus is not contracted or if there is excessive bleeding, gently massage the uterus and take appropriate steps. These observations should be made on post caesarean patients also.

Diagnosis of PPH

Instead of visual estimate, the blood loss is measured by calculating the difference in weight of the mops, absorbent mats etc before and after use. Blood loss is calculated using the formula: 1 gm gain in weight is equal to 1 ml blood loss. To this may be added any blood collected in the suction bottle. Allowance should be given for amniotic fluid which might have been sucked in.

To diagnose the impact of bleeding on the woman, use shock index - pulse rate divided by systolic blood pressure. When they are equal or when heart rate is more than systolic pressure, significant blood loss has to be suspected.

Steps to Arrest Bleeding Immediately

This is the most revolutionary concept that has evolved in PPH management.

Now we have instruments that can be used to stop the bleeding from the uterus by transvaginally clamping the uterine arteries with the special clamp developed by us. This will be especially useful in controlling atonic PPH and lower segment PPH. The transvaginal uterine artery clamps (TVUAC) should be available in every labour room as a set with suitable retractors and sponge holders. The anterior and posterior lips of the cervix are held with the sponge holders and pulled down and the TVUAC is applied at 3'o clock and 9'oclock positions. Even the midwives should be able to apply it with minimal training

Samartha Ram from Kerala has come out with a cannula which can be inserted into the uterine cavity as soon as atonic PPH is suspected. With the suction force, uterus will collapse on to the cannula and will become rigid. This leads to cessation of blood flow through the blood vessels traversing the myometrium, thereby stopping the bleeding.

Rethink on Established Methods to Stop The Bleeding

We feel that tamponade using condom or Bakri Balloon may not be required once TVUAC or suction cannula is used.

Step wise devascularisation is less commonly used these days

Similarly, the hemostatic procedures like B-Lynch or Hayman's are less needed.

Internal iliac artery ligation is mostly done for traumatic PPH involving cervix or vagina.

Obstetric hysterectomy is seldom undertaken for atonic PPH

Approach to Placenta Accreta

The most dramatic difference that has happened is in the management of placenta previa accreta. This life threatening cause of PPH has now become less of a nightmare with the use of aorta clamp to cut off the blood flow to the pelvis. Usually the problem starts when the operator tries to separate bladder from the extruded placenta. The aorta clamp that we have developed does not need dissection and isolation of the vessel for applying the clamp. The lower end of aorta can be pulled up with a Babcock forceps and the aorta clamp applied. Hence an obstetrician can apply it without the help of a vascular surgeon.

Conclusions

New thoughts on management of PPH are rapidly evolving so that PPH will stop to be the nightmare that it was. Our aim is to save the lives of the mothers who would have otherwise succumbed to PPH.

Controversies in the Management of Tubal Ectopic Pregnancy

Bhaskar Pal
Senior Consultant, Obs & Gynae, Apollo Gleneagles Hospital, Kolkata

Ectopic pregnancy (EP) occurs with an approximate incidence of 1% and remains a major cause of maternal death. 95% of ectopic pregnancies are tubal with the majority in the ampulla. Early diagnosis is the key to reducing mortality and morbidity as we can resort to less invasive treatment methods.

Diagnosis

Diagnosis of ectopic pregnancy requires a high index of suspicion. We were taught to be "ectopic minded" to be able to diagnose ectopic pregnancy. Any woman in the reproductive age group presenting with an abdominal pain should have a urine pregnancy test, irrespective of her family/sexual history and nature/site of pain. We should be able to see an intrauterine gestational sac on TVS with a serum b-hCG value of 1500 iu or more. For transabdominal scan the threshold level of b-hCG is 6000. With the current USG machines, one should be able to see a non-cystic adnexal mass to diagnose an ectopic. Mere absence of intrauterine pregnancy with a b-hCG value above the threshold is not enough to diagnose an ectopic pregnancy and should be classified under Pregnancy of Unknown Location (PUL). Also, a diagnosis of complete miscarriage should not be based on a single USG showing an empty uterus and requires a falling b-hCG level to confirm the diagnosis. Risk factor assessment is not helpful in diagnosis, except for the history of a previous ectopic pregnancy.

Role of Medical Management

While many agents and route have been tried for medical management, systemic methotrexate (MTX) has stood the test of time. Usually a single dose is used, although some countries use a multi dose regimen with folinic acid rescue. The success rate depends on the criteria used for medical management. Using a cut off b-hCG level of 3000, EP size of <3cm and no haemoperitoneum, the success rate of single dose MTX (50mg/sqm) varies between 80-90%, although about 15% require a second dose after a week if the fall in b-hCG is suboptimal. Approximately 10% require surgical treatment following MTX therapy. Medical management should not be used if the patient is symptomatic or unstable, in the presence of significant free fluid in pelvis, live ectopic gestation and if the compliance of the patient is uncertain (ie patient has to return for follow up).

Surgical Treatment: Laparoscopy Vs Laparotomy

Three Randomised Controlled Trials (RCT) with a total of 228 patients demonstrated the superiority of laparoscopy which is associated with less intraoperative blood loss, shorter operating time, shorter hospital stay, lower analgesic requirements and a trend towards lower future EP risk, with no difference in future intrauterine pregnancy (IUP) rates when compared with laparotomy. Laparotomy should be reserved for the haemodynamically unstable patients where the anesthetist and the surgeon are not happy to proceed with laparoscopy. This is relative depending on the experience of the surgeon and the anaesthetist. Laparoscopy should be the default route of choice in surgical management of EP.

Surgical Treatment: Salpingectomy vs Salpingotomy

This has been a matter of great debate; the argument for salpingectomy has been a reduction in future risk of EP. The argument in favour of salpingotomy has been a higher future IUP rates, although with a higher risk of persistent trophoblast. Historically most retrospective studies showed a higher future IUP rate with salpingotomy. However, one large observational study and two RCTs published in the past five years showed no statistically significant difference in future IUP rates with salpingectomy compared to salpingotomy. Hence if the contralateral tube is healthy, salpingectomy should be the procedure of choice. If the contralateral tube is diseased, usually linear salpingotomy is performed with serial b-hCG follow up to rule out persistence of trophoblastic tissue.

Conclusion

Early diagnosis of EP is essential, and it requires demonstration of EP or non-cystic adnexal mass on TVS. Systemic MTX is an effective treatment modality in well selected patients. Laparoscopy should be the route of choice in surgical management; salpingectomy should be performed if the contralateral tube is healthy.

Basics in Urogynaecology

Ajay Rane Oam
Consultant Urogynaecologist, James Cook University, Australia

Urogynaecology is a subspeciality that looks after lower urinary, genital tract and lower gastrointestinal tract.

In essence a urogynaecologist needs to be very conversant with the physiology of bladder, bowel and sexual function.

In addition a very detailed knowledge of surgical anatomy of the pelvic structures and its dynamic relationships forms the hallmark of clinic pathological co relation.

In this lecture, we will be discussing dynamic pelvic anatomy and the very levels of pelvic supports along with its correlation to clinical signs and symptoms. Then we will looks at the various ways of eliciting bowel, bladder and sexual histories with correlation to quality of life and bother scores to make better judgement on treatment options.

After that we will discuss the most important clinical assessment of the pelvis and learn to quantify prolapse and its severity. It is important that vaginal movement should not be confused with disease. Asymptomatic stage 2 prolapses should not be operated on if possible.

Investigations include a urine analysis, a bladder diary and/ or a pad test at the least. A transperineal ultrasound can help confirm diagnoses of prolapse in a compartment specific way. This is easily learnt since most clinics have ultrasound machines.

Urodynamics are an important tool of assessment that has to be judiciously used to improve patient care.

Other more involved tools could be MRI and defecation proctography especially in recurrent symptoms or failed surgery.

Once the assessment is done an algorithm is presented regarding the management of genital prolapse (which could include – no treatment, physiotherapy, pessaries and/or surgery). Urinary incontinence has its own algorithm for management.

For fecal and flatus incontinence colorectal surgical input may be sought in complex patients.

Finally it is important that basics of urogyanecology also focuses on good obstetric practice during childbirth to reduce or avoid pelvic floor trauma.

Impact of Stillbirth: A preventable tragedy

Nuzhat Aziz
Head, Department of Obstetrics, Fernandez Hospitals, Hyderabad

"What is a stillbirth? Giving birth to death when you wanted life"

India has the largest number of stillbirths for any country, a sad 592,000 as the number of babies lost for the year 2015.[1] The reduction in stillbirth rate has been much lower than the maternal death or the neonatal mortality rates. The drive for reduction of the maternal mortality rates has not focussed on the parallel reduction of avoidable stillbirths. Lancet series on stillbirth in published in the year 2016, mentioned 10 countries as being responsible for 2/3 of stillbirths, 60% of neonatal deaths and 58% of maternal deaths that happen across the globe. The 2015 worldwide stillbirth rate is 18.4/1000, India stands at 23/1000. The wide discrepancy in stillbirth rates varies from 1.3 to 45/1000 births between high income and low resource countries. The concept of unavoidable stillbirths due to congenital anomalies applies only to 7% of all causes, leaving a huge 93% with a scope to have an introspection; with a possibility of prevention. The psychological impact of a stillbirth on the life of a woman leaves an impact which remains through her life. A stillbirth scars a woman for life.

Definition: Stillbirth is defined as a baby birth after 28 weeks gestation without any signs of life (WHO definition

for international comparisons).[1] The stillbirths can occur in the antepartum period (during pregnancy) or in the intrapartum period (a child being alive for 9 months inside the mother's womb but dying in labour). The causes of stillbirths in the antenatal period is different from intrapartum period. The proprtion of antepartum to intrapartum deaths differs based on the quality of intrapartum care that is available. WHO says one in two stillbirths occur in intrapartum period in low resource countries.

Antepartum Stillbirths: The important causes of a baby dying in the womb before labour are maternal conditions (hypertension, diabetes, etc), fetal growth restriction, birth defects, maternal infections (syphilis), placenta or cord related events and a small proportion of unexplained stillbirths. Many of these babies at risk of dying can be identified and timely intervention taken.

Intrapartum Stillbirths: Intrapartum deaths are extremely rare in countries with low stillbirth rate, suggesting that improvement in intrapartum care will have a major impact on reducing the stillbirth rates. Early neonatal deaths within one week of birth also have a high proportion of deaths due to birth asphyxia. Intrapartum events are believed to be responsible for 19.2% of all the neonatal deaths in India.[2] Almost all deaths (97.8%) due to asphyxia occur in the first week of life, with 70% of them occurring within the first 24 hours of life (day 0).[2]

Extrapolating this information

If we improve fetal monitoring in labour

592,000 stillbirth per year in India	640,000 neonatal deaths per year
50% are intrapartum related[1]	640,000 neonatal deaths per year
296,000 intrapartum stillbirths PREVENTABLE	122,880 neonatal deaths PREVENTABLE

If we can identify fetal growth restriction

592,000 stillbirth per year in India	254,560 FGR related stillbirths Aiming for 50% as the detection rate 127,280 stillbirths PREVENTABLE
43% are fetal growth restricted[3]	

Proposed Plan of Action: The universally accepted target of reducing the stillbirth rate to 12/1000 by the year 2030 would require a planned approach in phases. Prioritising interventions which have been proven to have maximum impact, we have to focus on strengthening the intrapartum fetal monitoring and detection of fetal growth restriction. This lecture will discuss ways of reducing this impact on a couples life.

References

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Competition Papers

[CP - 01]

Three Rings Vulvoscopy (TRIV) for Evaluation of Vulvar Disorders - A pilot study

Chingbiaklun Shoute, Amita Suneja, Archana Singal Sonal Sharma, Kiran Guleria, Richa Sharma
University College of Medical Sciences
and Guru Teg Bahadur, New Delhi

Objective: To test a new approach of Three Rings Vulvoscopy (TRIV) to diagnose vulvar disorders.

Methods: A cross sectional and observational study was conducted between November 2018 to April 2020. 100 women with vulvar complaints and 100 asymptomatic women who underwent Colposcopy for cervical evaluation in Hospital were recruited for the study. All 200 women were subjected to Three Rings Vulvoscopy (TRIV) and Conventional vulvoscopy by two different observers. Documentation of specific and non-specific lesions were done in ring-wise manner on TRIV. Biopsy was taken from pathological lesionsfound during Conventional vulvoscopy.

Results: The most common symptom among cases was Itching in the vulva (82%) followed by burning sensation (5%) and 4% with pain. Vulvar dermatoses depicted non-specific and specific lesions on TRIV in all three rings. VIN depicted only specific lesions mainly in the inner ring (63.64%) followed by outer ring (27.27%). Condylomata acuminata represented as specific lesions in the outer and middle ring. Two more clinical entities were added after vulvoscopy of cases and controls in TRIV i.e. *Vulvodynia* and *Impaired Vulvar skin*. TRIV depicted that impaired Vulvar skin has non-specific lesions mostly present in inner ring (92%) followed by middle ring (33%). Vulvodynia was diagnosed in the absence of lesions and positive cotton swab test and mostly found in the inner ring followed by middle ring. Time taken during TRIV and Conventional Vulvoscopy was comparable. Inter-rater Kappa agreement between TRIV and Conventional Vulvoscopy in symptomatic women was found to be a very good agreement.

Conclusion: Three Rings Vulvoscopy is a feasible and systematic approach for interpretation of lesions in patients of vulvar discomfort. There is a specific pattern of distribution of lesions in the three vulvar rings in different vulvar disorders. TRIV was easier to interpret, more anatomical and systematic. It allows better documentation of vulvoscopy findings.

[CP - 02]

Association of Fetal Urine Production Rate and Fetal Inflammatory Response Syndrome in Cases Of PPROM

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Introduction: Preterm premature rupture of membranes (PPROM) affects 2%-4.5% of pregnancies and is associated with increased risk of maternal infection and potentially devastating fetal complications including premature birth, neonatal sepsis. Although numerous biomarkers have been studied to assess the risk of maternal and fetal infection, but none have proven to be accurate in predicting the same. The fetal response to infection- termed as fetal inflammatory response syndrome (FIRS) represent the fetal counterpart of systemic inflammatory response syndrome (SIRS). SIRS is characterized by redistribution of blood flow to more vital organs like heart and brain and thereby decreasing the blood supply to kidneys and hence decreased urine production. Thus fetal urine production rate (FUPR) measured antenatally can be used as an early marker of fetal inflammatory response syndrome (FIRS) in patients with PPROM

Objective: To evaluate the association between fetal urine production rate (FUPR) and fetal inflammatory response syndrome (FIRS) in cases of preterm premature rupture of membranes (PPROM).

Methods: We conducted a prospective cohort study where we recruited 70 women with singleton pregnancies complicated by PPROM presenting at gestational age of 28-34 weeks. The patients were managed conservatively till 34 weeks period of gestation or until they went in spontaneous labor or had evidence of chorioamnionitis. FUPR was calculated by doing serial fetal bladder volume measurements and was repeated weekly till the patient delivered. At the time of delivery, cord blood sample was taken for measuring Interleukin-6 (IL-6) levels. Placental tissue was collected and sent for histopathological examination to look for features suggestive of FIRS and chorioamnionitis. Neonates were followed up and neonatal outcomes were noted as admission to NICU, duration of NICU stay and severe neonatal morbidity.

Results: Out of 70 recruited patients with PPROM, 44 patients had evidence of FIRS diagnosed either by raised IL-6 levels or by placental histopathologic features of FIRS. The overall prevalence of FIRS in cases of PPROM in our study was 62.86%. The mean FUPR at the time of delivery was significantly reduced in neonates who had evidence of FIRS as compared to the Non FIRS group (13.89±8.06 ml/h vs 25.89±4.94ml/h). Out of 41 patients with reduced FUPR prior to delivery, 39 babies had FIRS whereas only 5 out of 29 babies with normal FUPR, had FIRS (p value <0.0001). The mean IL-6 levels in the FIRS group was77.37±74.51 pg/ml whereas in the Non FIRS group it was 5.75±2.80 pg/ml. Overall severe neonatal morbidity was found in 24 out of 41 (58.54%) neonates with reduced FUPR antenatally as compared to 11 out of 29 (37.93%) neonates with normal FUPR. Higher rate of neonatal sepsis was seen in neonates with reduced FUPR as compared to neonates with normal FUPR (58.54% vs 34.48%). The occurrence of RDS, NEC was significantly high in neonates with recued FUPR.

Conclusion: Reduced FUPR is strongly associated with development of FIRS in cases of PPROM and hence can be used as an early predictor of adverse neonatal outcomes.

[CP - 03]

The Next Frontier: Liquid biopsy for diagnosing ovarian cancer- quantification of cell-free DNA and p53 mutational analysis

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Introduction: Circulating tumor DNA found in patients with malignancy, enters plasma due to lysis of cells at the interface between the primary tumor and the circulation. This cell-free DNA harbours tumor-specific mutations enabling diagnosis of ovarian malignancy. The present study aims at defining the distribution and dynamics of cell-free DNA in women with epithelial ovarian tumors and study a non-invasive technique akin to non-invasive prenatal testing (NIPT).

Objectives: The primary objective of this study was to isolate and quantify cell-free DNA (cfDNA) from peripheral blood, analyze p53 mutations and correlate with tumor burden in epithelial ovarian malignancy. Secondary objective was to study the degree of agreement between cfDNA p53 mutations and tissue p53 immunohistochemistry.

Methods: This prospective case-control study was carried out over 18 months from November 2018 to April 2020 at a teaching institution. Considering the exploratory nature of the study, study group (n=20) comprised women with epithelial ovarian malignancy. Control groups were women with borderline tumors (n=10) and benign epithelial ovarian tumors (n=10). 58 women who were treatment naïve and admitted for surgery entered the study but only those with a final histopathology of epithelial ovarian tumor (malignant, borderline and benign) were included. Frozen section was done intraoperatively when indicated and cytoreductive/conservative surgery tailored accordingly. Peritoneal carcinomatosis index (PCI), surgical complexity score and cytoreductive score was calculated in women undergoing primary cytoreduction.

Plasma samples for cfDNA was collected just before surgery and stored at -20°C. cfDNA was extracted from plasma serum using a DNA isolation kit and quantified with Nanodrop Spectrophotometer. ARMS PCR was used to detect a point mutation in Exon 8, codon 239 of p53 using primer pairs. p53 immunostaining was performed on tissue samples using monoclonal antibody directed against p53.

Quantitative variables were associated using Kruskal Wallis Test between the groups and independent t-test for comparison between two groups. Fisher's Exact test was used for qualitative variables and inter-kappa agreement was used to find out strength of agreement between tissue p53 mutation and cfDNA p53 mutation.

Results: In women with malignant ovarian cancer isolated cfDNA was highest (1330 ng/mL) in comparison to those with benign or borderline ovarian tumors (748.5 ng/mL and 448.5 ng/mL, respectively) reaching statistical significance, p=0.023. Quantity of cfDNA also correlated well with the histopathological grade of the tumor and stage of the disease, p<0.05. Analysis of cfDNA p53 mutation in exon 8 showed that 55% of the women diagnosed with malignant ovarian tumor harboured this mutation (p=0.043). Correlation of tissue p53 with cfDNA p53 mutation was statistically significant, p=0.007. All women with malignant ovarian tumor in whom cfDNA p53 mutation was present at codon 239 of exon 8 stained positive for tissue p53 mutation.

Conclusion: cfDNA p53 mutation was detected at higher frequency in women with malignant epithelial ovarian cancer. Significant correlation was seen between tissue p53 and cfDNA p53 mutation suggesting that mutational analysis of cfDNA could act as biomarker for the diagnosis of ovarian tumors.

[CP - 04]

Efficacy of See and Treat Approach at Colposcopy in Via Based Screening

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Introduction: India has the highest age standardized incidence of cervical cancer in South Asia. WHO recommends VIA (Visual Inspection with Acetic acid) based screening as the visual methods are more practical and cost effective with immediate results. As per the Operational guidelines from GOI, VIA positive women should have Colposcopy and treatment based on the Colposcopic findings and biopsy. However, lost to follow-up rates are high among women in our country. The concept of SEE AND TREAT has been described for cytology based screening for women having a high grade smear and high grade lesion on Colposcopy and offered excisional treatment by LLETZ (Large Loop Excision of Transformation Zone) without a biopsy. In the present study, we evaluated this approach in an exclusively VIA screened population.

Objectives: Our objective was to perform SEE AND TREAT approach by LLETZ in VIA positive women having Colposcopic Swede score of ≥5 and evaluate the efficacy and overtreatment rate for it.

Methods: A Prospective Interventional Study was conducted after ethical approval in womenbetween the age group of 25-50years who came to the Gynaecology OPD and consented for the study. They had opportunistic screening with VIA; the VIA positive women underwent Colposcopy and SEE and TREAT using LLETZ if the Colposcopy findings were suggestive of a high grade lesion. The cut off for Swede score taken in the present study was 5. The LLETZ specimen was sent for histopathological examination which was the gold standard. Treatment was described as acceptable if the HPE report was CIN 2+ and overtreatment was defined as an HPE report of no CIN or CIN 1.

Results: Colposcopy was carried out for 688 women who were VIA positive; of them 101 had a high grade lesion and underwent LLETZ. The mean age in the study was found to be 38.12(SD 6.51) and the mean parity was 2.58 (SD 1.03). All women who underwent LLETZ had CIN on histopathology. There were 35 women (34.6%) with CIN 1, 55 (54.5%) had CIN 2 and 11 (10.9%) has CIN 3. Resection margin was positive in 4 out of 101(3.96%) women. The SEE and TREAT approach was acceptable in 65.4% while an overtreatment rate of 34.6% was observed. There were no major complications.

Conclusion: A SEE AND TREAT approach in a low-resource setting with VIA followed by Colposcopy and treatment can help in reducing the number of visits, loss to follow up, and thus in decreasing the disease burden of cervical cancer in our country.

[CP - 05]

Expression of Calcium Activated Potassium Channels (KCNMA1) in Cervical Tissue as A Biomarker of Cervical Pre Cancer and Cancer: A comparative study

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Background and Objectives: Cervical cancer has emerged as the fourth most common cancer worldwide and the second most common cancer in India. Various diagnostic and prognostic biomarkers have been developed and few studies on calcium and potassiumbased ion channels have them shown to be a promising biomarker. The objective was to study and compare the mRNA and protein expression of calcium-activated potassium channels (KCNMA1) in pre-invasive and invasive cervical cancer.

Design: Comparative study

Methodology: Two hundred and one screen positive women underwent colposcopy, out of which 92 cervical biopsies were taken. Cervical biopsy was also taken from women with an obvious cervical growth in 8 cases. For controls, biopsy was taken from 15 cases who underwent hysterectomy for benign gynecological indications with normal screening tests. From the above cohort, 60 women were recruited to the study and allocated equally (n=15) into four groups on the basis of histopathology, i.e. control (Group1), cervical intraepithelial neoplasia 1 CIN1(Group2), CIN 2/3(Group 3) and invasive cervical carcinoma (Group 4). KCNMA1 mRNA level estimation was done by real-time RT-qPCR. Protein expression was studied using immunohistochemistry using anti- KCNMA1 rabbit polyclonal antibody against Maxi Potassium channel alpha.

Results: The mean KCNMA1 mRNA levels in Controls (Group1) was 0.2253(SD±0.5798) while the mean levels in CIN1(Group 2) was 271.40(SD±1050.21), CIN2/3(Group 3) was 298.84(SD±1153.33) and in cancer cervix (Group 4) was 326.545(SD±861.97) (p=0.039). The protein expression was negative in controls, positive in 34% in CIN1, 80% in CIN2/3 and 100% in the cancer cervix group(p=<0.001). For diagnosis of CIN2/3, best cut-off point for mean KCNMA1 mRNA levels was 4.3 at which the sensitivity was 80.00% and specificity was 73.33% (p=0.08). For diagnosis of cancer cervix, best cut off point was 1.2174 at which sensitivity and specificity was 60% respectively (p=0.1069). On subgroup analysis in cervical cancer, KCNMA1 channel mRNA levels and protein expression was significantly higher in tumour size >3cm, poorly differentiated tumours, deep stromal invasion and non keratinising squamous cell carcinoma.

Conclusion: KCNMA1 channel expression has promising role as a diagnostic and prognostic biomarker of cervical precancer and cancer. Further studies with larger sample size are needed to establish diagnostic cut off points for mRNA levels.

Keywords: Cervical cancer screening, Cervical cytology, Cervical Intra-epithelial neoplasia, Colposcopy, KCNMA1 channel, Invasive cervical Cancer

[CP - 06]

A Prospective Study of Fetal Cardiac Profiling in Appropriately Grown, Small for Gestational Age and Growth Restricted Fetuses and Its Association with Perinatal Outcome

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Introduction: Fetal growth restriction (FGR) has been a challenging issue in clinical practice. It is significantly related to adverse perinatal outcome. Myocardial performance index (MPI) is one of the indicators of fetal cardiovascular situations. It is a non-invasive Doppler-derived indicator that evaluates global myocardial function

Objective: To evaluate the association of the Myocardial Performance Index in predicting adverse perinatal outcomes in SGA and FGR foetuses.

To study the predictive value of Cerebroplacental ratio (CPR) and Myocardial Performance Index in FGR foetuses.

Methodology

Study Design: Prospective cohort observational study

Place of Study: Department of Obstetrics and Gynaecology

Study Duration: Jan 2018-Jan 2020

The study was started after taking ethical clearance from the institutional ethics committee.

Singleton pregnancies were recruited prospectively among women attending antenatal clinic from 24 weeks period of gestation.

Inclusion Criteria

- Confirmed dating by first trimester scan.
- Normal anatomy scan
- AGA foetus which is defined as having a normal growth velocity with an estimated foetal weight centile plotted between the 10th and 90th centiles.
- SGA which is defined as those foetuses with estimated foetal weight between 3rd to 9th centiles without Doppler changes.

Exclusion Criteria

- congenital malformations,
- multiple pregnancies,
- chromosomal anomalies,
- abnormal foetal heart rates (either tachycardia or bradycardia)

At each contact the patient underwent a scan for growth and liquor with detailed doppler studies which included Umbilical Artery PI, Middle Cerebral Artery PI, Ductus Venosus PI, Aortic Isthmus PI and Cerebroplacental Ratio was calculated. Foetal Echocardiography was done to rule out any structural anomalies and arrythmias. Modified Myocardial Index was determined using the technique described by Hernandez et al.[3]

Results: The following observations were made in FGR Group against SGA and AGA groups that were statistically significant:

- Umbilical artery PI, Aortic Isthmus PI and MPI were higher while Middle Cerebral Artery PI and Cerebroplacental Ratio were lower in FGR group.

- MPI (Myocardial Performance Index) : The odds ratio for Composite Adverse Perinatal Outcome in FGR group *for MPI >0.47* is 3.48 (95% CI : 0.99 - 12.24, p value <0.05) *with sensitivity and specificity of 65% each.*
- CPR (Cerebro-Placental Ratio) : The odds ratio for Composite Adverse Perinatal Outcome in FGR Group *for CPR <1.67* is 11.08 (95% CI : 2.62 – 46.83, p value =0.001) *with sensitivity of 70% and specificity of 86% each.*
- Combined MPI and CPR : In the FGR group when the cut off values for MPI was taken > 0.47 and CPR< 1.67; using Logistic Regression Analysis, it was found that the OR (Odds Ratio) was 58.5 (95% CI : 4.58 – 746.57, p value =0.002) *with sensitivity of 95% and specificity of 56.5%.*

Conclusion

- Myocardial Performance Index, Cerebro Placental Ratio and Iso-Volumetric Relaxation Time were found to be independent risk factors for composite adverse perinatal outcome in FGR Group.
- A combined assessment of MPI and CPR increased the percentage accuracy in predicting composite adverse perinatal outcome in FGR Group.

[CP - 07]

Detection of Placental Chlamydia Trachomatis, Mycoplasma Hominis, Ureaplasma Urealyticum and Their Relation with Galectin-3Mrna Levels in Women with Preterm Labour

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Introduction: Despite new advances in obstetric and neonatal management, the rate of Preterm Birth (PTB) is increasing.The majority (two-thirds) of PTB cases are attributed to spontaneous PTB (SPTB); the remaining one-third are medically indicated, due to maternal or fetal complications.

Intrauterine infection may play a role in preterm delivery due to spontaneous preterm labor (PTL) and preterm prolonged rupture of membranes (PPROM). Because bacteria previously associated with preterm delivery are often difficult to culture, a molecular biology approach was used to identify bacterial DNA in placenta and fetal membranes. Unfortunately, it is unlikely to have a single test for predicting PTB, but a combination of tests can help to improve clinical prediction. There is also less literature linking Gal-3mRNA with placental infection of various organisms in women with preterm labour. It is highly likely that all of the above information combined, will not only increase our understanding of these organisms during pregnancy, but importantly will allow us to establish useful microbial biomarkers.

Objectives: Keeping this in mind, this study was proposedto detect placental Chlamydia trachomatis, Mycoplasma hominis, Ureaplasma urealyticum and their relation with Galectin-3mRNA levels in women with preterm labour.

Methods: A prospective, observational cohort study was conducted including women with PTL and delivered at 28-36+6 week gestation. Study population was divided in 2 groups, women with PPROM and PTB (n =28) were designated as group A, while women with PTB without PPROM (n =72) were designated as group B. Placental tissue sample was collected immediately after delivery for pathogens detection, detection of Galectin-3mRNA level.

Results: Overall 18 women out of 100 women with PTL had Chlamydia trachomatis, and 9 women had Mycoplasma Hominis, and 10 women had Ureaplasma urealyticum in placental cultures.Out of 18 women with PTL who had Chlamydia trachomatis in, 9 women out of 18 had Chlamydia only, 4 women had both Chlamydia and Ureaplasma both simultaneously, 2 women had Chlamydia and Mycoplasma in combination, while 3 women had Chlamydia, Mycoplasma, Ureaplasma all 3 organisms positive in their placental cultures.

Chlamydia trachomatis was present in the placenta of 64.2% women in group A. While in group B, all were negative for Chlamydia trachomatis culture.

Mycoplasma hominis was present in 32.1% placenta of women in group. While in group B, all placentae had negative result for Mycoplasma hominis culture. On further evaluation 3.6% women had positive result for both Mycoplasma and Ureaplasma.

Ureaplasma urealyticum was present in 35.7 % of women in group A. While in group B, 1.4 % had positive result for Ureaplasma urealyticum culture.

Upon analysis, the Gal-3 gene was found 13.4-fold upregulated in the infected group, placental infection with Chlamydia trachomatis/Mycoplasma hominis/Ureaplasma urealyticum leads to an increased placental expression of Gal-3 mRNA in women experiencing Preterm labour.

Conclusion: These data strongly support the concept that bacteria play an important role in many cases of preterm delivery and raised interesting hypothesis about the role of Galectin 3mRNA in maternal immune system and how maternal contribution of this glycoprotien during gestation affects PTL.

[CP - 08]

Fetal Growth Restriction as Defined by Delphi Consensus and The Associated Perinatal Outcomes: A prospective observational study

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Introduction: Till date Fetal Growth Restriction has been defined on the basis of its biometry (AC/EFW) whereas true definition means failure of a fetus to reach its full growth potential irrespective of its size. Delphi consensus has standardised the definition of early and late onset FGR using size (biometry) as well as functional parameters (doppler blood flow). The clinical validity of Delphi consensus in terms of perinatal outcomes has yet to be tested.

Objective: To assess and compare the incidence and perinatal outcomes of fetal growth restriction classified by Delphi consensus as against conventional definition.

Methods: It is a prospective observational study on consecutive 500 patients, February 2018 onwards, in a tertiary hospital, with fully equipped neonatal intensive care unit. 70 patients were excluded, as predefined exclusion criteria. Final 430 subjects were enrolled as study population. Enrolled subjects, apart from dating USG at first visit and anomaly scan in 2nd trimester, a transabdominal USG using 5MHz curvilinear probe for fetal assessment was done between 26-32 week with at least one scan at 31-32 weeks to identify early onset FGR. Then repeat USG between 35-36 weeks was conducted to identify late onset FGR.

All recruited subjects were categorised as Conventional FGR i.e. AC/EFW<10th %ile (C), early onset (C1) and late onset (C2), Delphi defined FGR (D) based on Delphi Consensus criteria, early onset (D1) and late onset (D2), Non Delphi Conventional FGR as (C-D), early onset (C1-D1) and late onset (C2-D2). Rest of the fetuses were designated as Non FGR (>10th %ile). Hence association of incidence along with perinatal outcomes in each group were compared.

Results

1. Incidence of FGR was- Conventional criteria: 35.8%, Delphi criteria: 22.7% and Non Delphi Conventional FGR: 13.1%.
2. Delphi defined FGR had statistically increased incidence of PPHTN, Hypoglycemia and NICU admission in comparison to Conventional FGR.
3. Delphi defined FGR also had statistically significant increased frequency of viz Apgar <7, PPHTN, Hypoglycemia, seizures, NICU admissions and prolonged stay as compared to Non Delphi Conventional FGR group.
4. Comparing Non FGR fetuses with Non Delphi Conventional FGR fetuses, neonatal outcomes were similar in both groups.

Conclusion: Delphi defined FGR is associated with increased frequency of adverse perinatal outcomes as compared to Conventionally defined FGR.

Delphi defined criteria, should be routinely applied to a fetus who is small (AC/EFW<10th %ile). This will timely identify a truly growth restricted fetus, who is at risk for adverse perinatal outcome and save the rest from unnecessary monitoring and intervention. The findings of our study call for larger studies validating the use of Delphi consensus in clinical practise.

[CP - 09]

Ultrasonographic Assessment of Cervix for Prediction of Successful Induction of Labour

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Introduction: Bishop Score is the gold standard for pre-induction assessment of state of cervix in terms of prediction of successful Induction Of Labour (IOL). Sonographic assessment of cervix can be a patient friendly assessment option with lesser inter and intra observer variation than in conventional Bishops scoring.

Objective: The present study was done to evaluate the role of pre induction cervical assessment by transvaginal sonography(TVS) for prediction of successful induction of labour.

Materials and Methods: This prospective observational cohort study was conducted in Department of Obstetrics and Gynaecology Hospital on 140 women who were planned for induction of labour over duration of one year. The pre induction Bishops score and ultrasonographic parameters like cervical length, funnelling width, Head Perineum Distance (HPD), cervical width and Angle of Progression (AOP) were assessed by two different observers. Patients were followed till delivery and labour outcomes were recorded. Statistical analysis was done using the statistical package for social sciences (SPSS) version 21.0.

Results: The combined sensitivity and specificity of various Bishops parameters for predicting successful IOL was found to be 83.06% and 50% respectively while that for TVS were 89.52% and 100% respectively. The respective ROC curves reflected cut off of < 2.99cm, >0.2cm, >2.9cm, >3.1cm and >94 degrees for cervical length, funnelling width, HPD, Cervical width and AOP respectively, with significant association with successful IOL. Amongst these AOP had maximum sensitivity (87.90%) while both AOP and USG cervical length had maximum PPV of 99.1%. Straight shape of cervix was significantly associated with successful IOL.

Conclusion: Ultrasonography as an objective method for pre induction cervical assessment has a better predictive accuracy than conventional Bishop scoring, thus it can be used for pre induction cervical assessment.

[CP - 10]

Correlation of Serum Procalcitonin Levels with Sequential Organ Failure Assessment Score in Pregnancy Associated Sepsis

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Introduction: Sepsis in pregnancy is not reliably detected by commonly used laboratory markers like WBC, CRP as they are frequently raised in healthy pregnant females too. Reliable clinical and/or microbiological parameters that may be used to diagnose obstetric sepsis is lacking. Procalcitonin strongly correlates with extent and severity of bacterial infection and its concentration is not affected by neutropenia, immunodeficiency conditions and the use of NSAIDS, pregnancy related conditions while WBC and ESR do change. Procalcitonin has been studied as useful biomarker of systemic inflammatory response to infection. The Sequential Organ Failure Assessment (SOFA) score is a simple and objective score that allows healthcare providers in estimating the risk of morbidity and mortality due to sepsis and functions with fair to good accuracy for predicting in-hospital mortality when applied to patients with severe sepsis with evidence of hypoperfusion at the time of presentation. In this study, we correlate serial serum procalcitonin and SOFA to see whether procalcitonin can be used as a tool for monitoring, prognosticating and management of pregnancy associated sepsis

Objectives: The primary aim of the study was to correlate procalcitonin levels with SOFA score at admission in pregnancy associated sepsis. The secondary objectives were to correlate

of maternal outcome with procalcitonin and SOFA score at admission, correlation of maternal outcome with serial procalcitonin and serial SOFA score and comparison of procalcitonin levels between culture positive and culture negative pregnancy associated sepsis.

Methodology: An analytical study was conducted at a tertiary care hospital where a total 85 cases of pregnancy associated sepsis which includes all pregnant, postabortal (up to 2 weeks) and postpartum women (up to 6 weeks) presenting with sign and symptoms of suspected maternal sepsis were evaluated. Those fulfilling exclusion criteriaany two of SIRS CRITERIA were considered as cases. Detailed history, risk factor assessment, physical examination and obstetric examination, septic workup was done and investigations were sent as per case presentation. Procalcitonin values and SOFA score was recorded at admission and at 48 hours. Correlation between the two variables was studied with Spearman rank correlation coefficient.

Results: Mean SOFA was 6.25 ± 4.85 at admission and 5.93 ± 6.21 at 48 hours. The mean value of procalcitonin at admission was 2.78 ± 4.35 ng/ml and was 2.33 ± 3.99 ng/ml at 48 hours. A high SOFA score (0 hours) of 7 and more and high procalcitonin (0 hours) of greater than 1.25 ng/ml were statistically significant to prognosticate towards ICU admission and organ failure in sepsis. SOFA was in increasing trend in mortalities and decreasing trend in survivors and was statistically significant (p value <0.0001). SOFA score at both 0 hour and 48 hour had significant positive correlation with procalcitonin (Spearman rank correlation coefficient = r(0hour)=0.417, p value <0.0001, r(48 hour)=0.568, p value <0.0001).

Conclusion: It was concluded in obstetric sepsis, serum procalcitonin serial measurements reflect the degree of organ failure and has positive correlation with corresponding SOFA score.

Free Communication

Oral Presentation

Day 1: **24th October, 2020**

Theme: High Risk Pregnancy

[HRP0101]

Correlation of Rotational Thromboelastometry (ROTEM) and Plasma Fibrinogen Levels and Its Utility to Predict Post Partum Haemorrhage

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Background: Post-partum hemorrhage (PPH) is the most common cause of maternal mortality worldwide and its reported incidence is around 2-11%. Currently the standard coagulation tests available are prothrombin time (PT), activated partial thromboplastin time (aPTT) and plasma fibrinogen. The standard coagulation tests have a longer turn-around time (30-60 min). Rotational thromboelastometry (ROTEM) is a point of care, dynamic, visco elastic test that provides rapid coagulation pathway assessment and results are available within 15-20 minutes only.

Objectives: To study the correlation between FIBTEM parameters of ROTEM and fibrinogen levels in women delivering at ≥ 34 weeks of gestation.

Study Design: Prospective observational study.

Study Population: Study enrolled pregnant women in third trimester at ≥ 34 weeks period of gestation

Methodology: After obtaining informed consent from the patients and explaining them the nature of study, an extra blood sample was taken from them along with the routine blood samples taken on admission for delivery. Blood sample for ROTEM and fibrinogen was repeated after delivery in all the 100 patients and was taken 1 hr after delivery or at the onset of PPH. Enrolled women were divided into 2 groups after delivery: those who suffered from PPH were labelled as group A (study group) and those who did not suffer from PPH were labelled as group B (control group).

Findings of current study are:

1. Group A (study group) patients had lower levels of plasma fibrinogen as compared to group B (control group) patients. Median (IQR) of plasma fibrinogen was 3.2 g/L (2.3 – 4.8) in group A and 5.96 g/L (5.77 – 6.45) in group B.
2. FIBTEM A5 was significantly decreased in patients of Group A (study group) both before and after delivery as compared to group B (control group) patients.
3. Majority of patients (80%) had plasma fibrinogen of 4.1- 8 g/L on admission before delivery and 8% of patients had even > 8 g/L. This is much higher than the values in non pregnant women (2-4 g/L).
4. All patients who had pre or post delivery fibrinogen of < 2 g/L were 100% had PPH with incidence of PPH decreasing as level of fibrinogen increases.
5. There was a strong and highly significant correlation between plasma fibrinogen levels and FIBTEM parameters especially in patients with PPH. CT/CFT had a negative correlation and clot amplitudes of FIBTEM had a positive correlation with fibrinogen.

Conclusion

1. Plasma fibrinogen levels increase during the course of pregnancy with value of 4-8 g/L reached by third trimester.
2. There is a fall in level of fibrinogen after delivery with the fall more pronounced in patients with PPH. Plasma fibrinogen ≤ 2 .79 g/L is 100 % predictive of PPH and level of < 2 g/L is 100% predictive of severe PPH.
3. Plasma fibrinogen level and FIBTEM A5 can be used for predicting PPH and guiding blood transfusion in an appropriate manner once PPH has occurred.

[HRP0102]

Evaluation of Prenatal Ultrasound Markers for Prediction of Respiratory Distress in Early Preterm Newborns

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Introduction: Preterm delivery is a leading cause of perinatal morbidity and mortality worldwide, complicating about 5-18% of all pregnancies. The immediate and most common complication is respiratory distress which affects 0.69-8.3% of premature babies in developing countries and is a frequent cause of admission to special care nursery.

Objective: This study aimed to evaluate the role of the prenatal ultrasound parameters- fetal lung biometry and pulmonary artery Doppler in womenundergoingpreterm delivery for prediction of respiratory distress in newborns.

Methods: A prospective analytic study was conducted in Lady Hardinge Medical college and SSKH, from November 2018 to March 2020. Fetal ultrasound parameters were evaluated in women predisposed to have preterm delivery at or before 34 weeks.The fetallung biometry parameters included were thoracic/abdominal circumference, lung head ratio, fetal lung length and fetal lung volume. The pulmonary artery Doppler was done and pulsitility index, resistance index, systolic to diastolic ratio and acceleration time to ejection time ratio were evaluated. The neonates were followed for occurance of respiratory distress.

Results: Out of 100 study population, 36 neonates developed respiratory distress and were taken as cases and the rest 64 neonates were grouped as controls. All the fetal lung biometry and pulmonary artery Doppler parameters were compared between the cases and controls and analysed statistically. All the fetal lung biometric parameters were significantly less in cases than controls (p value<0.001) and AUC >0.5. The fetal lung volume had highest sensitivity (72.22%) and NPV (82.1%).

Whereas, the right lung area had highest specificity (89%) and PPV (72%). Among the Doppler parameters, only acceleration time/ejection time ratio showed statistical significance (p value<0.001, AUC=0.751, sensitivity= 55.56%, specificity =75%, PPV=72%, NPV=60%). The gestational age at delivery, mean birth weight and Apgar score was significantly less in cases than controls.

Conclusion: Both fetal lung biometry and pulmonary artery Doppler offers an excellent noninvasive approach for assessment of fetal lung maturity, clinically assessed by respiratory distress. On comparison of all the ultrasound parameters, fetal lung volume and At/Et ratio showed highest degree of accuracy in prediction of respiratory distress.

[HRP0103]

Rare and Deceptive Cause of Hypertension in Pregnancy: A case report

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Pheochromocytoma in pregnancy is a rare entity. Undiagnosed and untreated pheochromocytoma can lead to life threatening complications for both mother and fetus. We witnessed a case of pheochromocytoma masquerading as severe preeclampsia. A 19yr old primigravida presented to gynaecasuality at 29wks gestation with severe headache, blurring of vision followed by loss of far vision, with blood pressure of 200/130mmHG, provisional diagnosis of impending eclampsia made and patient started on MgSo4 and anti-hypertensives with simultaneous induction of labour. But she didn't respondto induction and was planned for emergency cessarian. Intraoperatively and postoperatively control of blood pressure remained a therapeutic challenge for both anaesthesia and surgical team. Postoperatively, diagnosis was made with NCCT and CECT abdomen and patient was optimizedwith alpha adrenergic blockers followed by surgical resection of adrenal tumour was done.

[HRP0104]

Maternal and Fetal Outcomes in Pregnancies with Covid-19: A Retrospective Analysis

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Introduction: The emergence of novel corona virus infection has resulted into a pandemic that rapidly expanded into one of the most significant public health problems in recent times. The knowledge of genetic, virologic, epidemiological and clinical aspects of this emerging agentis evolving but its behaviour in high risk vulnerable pregnant population is still unexplored.Changes in the maternal cardiovascular & respiratory systemsas well as immunological adaptations may increase the risk for pregnant women to develop severe respiratory disease. Thus,COVID-19 complications should be identified and treated early.At present we lackstudies from Indian population.

Objectives: To study the sociodemographic features, obstetric profile and clinical disease patterns in pregnancies with COVID-19,and to correlate with maternal and fetal outcomes.

Methods: Aretrospective analysis, from1st April 2020 to 15th August 2020, on acohort ofpregnant/ postpartum (within 6weeks) subjects with COVID-19 infection confirmed either by RT-PCRtest for SARS-CoV-2 on nasopharyngeal and oropharyngeal swabs or by rapid antigen test kits. Information was collected from department data base and case record files. All women seen in the Emergency either because they were showing clinical symptoms of COVID 19 or in laboror did not have home quarantine facility were admitted. Theywere classified into –Asymptomatic/Mild category: minimal symptoms, no respiratory distress, RR 12-15/min, fever < 100 F, SPO2 > 95%; Moderate category: RR 15-30/min, Fever 100-101.5 F, SPO2 90-94%, pneumonia on clinical/radiological examination; Severe category: Severe respiratory distress, shock, subnormal mentation, RR >30/min, fever >101.5 F, SPO2 <90%, ARDS, Septic shock.

Results: 99 pregnant women with Covid-19 infection were included in the study-; 82 testing positive byRTPCR and remaining 17 had positiverapid antigen test. There were 62 Antenatal and 37 postnatal patients. In study subjects, 3 aborted medically, 2 had ectopic pregnancy, 39 had NVD, 36 had LSCS &19 remained undelivered. The majority were young(median age 26.76 years), educated, urban background and sedentary (not practising yoga/exercise). *Obstetric profile*- Most of the patients were multiparous, presented in third trimesterwith no major associated medical or obstetric complications or obstetric complaints. Anaemia was commonest medical complication present in 58 patients,pre- eclampsia in 11, preterm labor 3, and IHCP/ transient liver dysfunction was observed in 3 subjects. *Clinical profile*- Asymptomatic/Mild disease—92, moderate disease- 4, severe disease – 3. Majority(65) had no COVID symptoms, fever (21) and breathlessness (8)while atypical symptoms like diarrhoea(2) and headache (1) were present in some. The mean SpO2 at admission was 98.17%. Most of the participants had no clinical findings in chest. Majority had normal TLC and platelet count and no covid changes on CXR. In treatment, Hydroxychloroquine & Azithromycin were given to more than 80%, Oxygen to 7.10%, steroids to 10.10% and LMWH was given to 75.75% patients.

There were 3 maternal mortalities; all had associated pre-eclampsia and anaemia and underwent emergency caesarean section. No neonate had asphyxia/ mortality. Testing for SARS-CoV-2 was performed onall neonates, with only onetesting positive by RTPCR.

Conclusion: The present data on Indian population do not suggest an increased risk of severe disease among pregnant women, as has been observed with earlier influenza infections, however certain factors may predispose them to severe morbidity/mortality like emergency caesarean section,pre-eclampsia and anaemia.

[HRP0105]

Role of Roller Gauze Pelvic and Abdominal Packing in intractable Hemorrhage After Caesarean Hysterectomy for Adherent Placenta

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Introduction: Placenta accreta spectrum (PAS) is a condition of abnormal placental invasion and is a major cause of severe maternal morbidity and mortality. The incidence and prevalence of PAS is increasing with the global increase in number of caesarean sections. Excessive and uncontrolled hemorrhage is the main cause of morbidity and mortality in Placenta Accreta spectrum.We present the role of combined intra pelvic and intraabdominal packing as a lifesaving approach for such morbid situation.

Objective: We present a series of 4 cases of adherent placenta managed by intraabdominal and pelvic pressure with roller gauzes, three of these patients had placenta Percreta invading into the bladder and one had placenta increta.

Methods: This case series describes theretrospectively analyzed outcome of 4 women with morbidly adherent placenta whounderwent packing in view of diffuse and intractableoozing from the vault and adjacent areas even after caesarean hysterectomy. Three to fourpovidone–iodine-soaked roller gauges were used, andremoval was done 48 hours later through exit sites of gauze without need for relaparotomy.

Results: The 4 patients underwent caesarean hysterectomy between 32-34 weeks gestation. Mean age of patients was 26.75 (±3.86) years. Prophylactic uterine artery catheterization (UAE) was done in 2 of 4 (50%) patients. Bladder was injured during separation in the three cases with placenta Percreta (100% Percreta, 75% of all). Massive bleeding was encountered and despite caesarean hysterectomy, bleeding from the vault and surrounding areas continued. All medical measures like blood and blood product transfusion and intravenous tranexamic acid were given in all four patients. Mean blood loss in the two patients who had UAE was 2100(±0) ml and the two who did not have UAE was 6200(±5374) ml. Immediate repair of bladder rent was done after caesarean hysterectomy. When all attempts to stop bleeding failed, decision for packing was taken. Packing was done using three to four 100 cm povidone iodine-soaked roller gauze. The packs were rolled up in the area to be packed and the 'tail' brought out of abdominal wall by passing it through a 1.5 cm stab incision in the abdominal wall while mounted on a slim hemostatic clamp. The tail was knotted to prevent it from slipping back into the abdomen. Patients were kept in intensive care unit for observation for till the pack removal and again for next 24 hours. Pack removal was done in operation theatre under IV sedation. Stab incision sites were closed when no bleeding was observed, and patients shifted back to ICU for further observation. Relaparotomy for pack removal and otherwise, and operative mortality due to excessive primary hemorrhage was avoided in all four patients. Mean ICU stay was 3.75(±0.95) days. None of the patients had any long-term complication related to the procedure.

Conclusion: Combined abdominal-pelvic packing can achieve acceptable results in patients with severe primary hemorrhage during surgery for PAS. Packing should be used in rare clinical situationswhere discrete bleeder is notidentified and patient's haemodynamic state worsenswhileon the operating table.

[HRP0106]

Effectiveness of Low Dose Versus High Dose Oxytocin Regimen for induction of Labour

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Introduction: Induction of labour refers to artificial stimulation of uterine contractions before the true onset of spontaneous labour in order to achieve vaginal delivery. The goal of labour induction is always to ensure the best possible outcome for mother and newborn.

Objective: The study aimed to evaluate effectiveness of two different regimens of oxytocin, low and high dose regimen for induction of labour.

Method: It was a randomized comparative study including 100 term nulliparous women (randomized into high dose, group-I and low dose, group-II with 50 patients in each) with bishops score of ≥ 6. High dose regimen was started with 4mu/min with increment of 4mu/min upto a maximum of 32 mu/min and low dose regimen started with 2mu/min with increment of 2mu/min upto a maximum of 32mu/min. Women with uterine scar, fetal malformation, non-cephalic presentation, and associated medical condition like heart disease and severe anemia or weight of fetus > 4kg were excluded.

Outcomes noted were: Induction to delivery interval, Rate of caesarean section, Tachysytole with or without fetal distress, failed induction, maternal outcomes like need for instrumental vaginal delivery, PPH and choriamnionitis, Neonatal outcomes like NICU admission, umbilical cord pH and apgar score etc.

Results: There was significant reduction seen in duration among those induced with high dose oxytocin. The induction to delivery interval was found to be 6.96 ± 3.77 hours in group-I and 9.05 ± 4.65 hours in group-II (p value 0.034). No significant difference was seen in the incidence of caesarean section (22% in group-I and 20% in group-II, p value 0.629), tachysystole with or without fetal distress (10% in group-I and 2% in group-II, p value 0.204), failed induction (5 % in each group), fetal distress (12% in group-I and 10 % in group-II, p value 0.749), mean duration of second stage of labour (34.13±23.53 minutes in group-I and 31.18±19.65 minutes in group-II, p value > 0.05), instrumental vaginal delivery (2% from group-I and 4% from group-II, p value 1), incidence of PPH and chorioamnionitis, apgar score at 1minute and 5 minute, need for NICU admission, maternal and perinatal morbidity and mortality.

Conclusion: On the basis of present study, high dose oxytocin regimen can be considered for induction of labour as it has same effects as that of low dose regimen with lesser induction to deliveryinterval.

Keywords: Tachysystole, induction of labour, failed induction, PPH, chorioamnionitis.

[HRP0107]

Role of Lipid Profile in Early Second Trimester for Prediction of Pre-Eclampsia

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Background: Hypertensive disorders during pregnancy affect around 8-10% of all pregnant women and can be associated with substantial complications for the woman and the baby. Pathophysiology of pre-eclampsia and atherosclerosis seems to be similar as a hyperlipidemic state, due to hormonal changes in pregnancy, but there are evidences to show that abnormal lipid metabolism in early pregnancy could be one of the factors for subsequent development of pre-eclampsia. Abnormal lipoproteins levels are responsible for damage to endothelium that leads to high blood pressure and proteinuria. Association of serum lipids with gestational proteinuric hypertension is highly suggestive of a role for lipid profile analysis as a diagnostic tool. Therefore, detection of dyslipidaemia in early pregnancy could be used in early prediction of pre-eclampsia, preventing the maternal morbidity and mortality.

Objective: Evaluating association of abnormal lipid profile in early second trimester (14 to 20 weeks) with development of pre-eclampsia and its prevalence in low risk pregnancy.

Methods: A prospective observational study was conducted on 260 women, in the department of Obstetrics and Gynaecology of ABVIMS and Dr. RML Hospital New Delhi, over a period of one year. The inclusion criteria were women with gestational age at 14 to 20 weeks irrespective of their parity and age between 18 to 35 years. The exclusion criteria included women with Diabetes mellitus, Chronic hypertension or any other cardiovascular disease, Smoker, History of Renal disease, liver disease or other history of prior medical illness, Previous history of pre-eclampsia, Thyroid disorder, Multiple gestation and BMI >25kg/m^2.At the time of enrolment, fasting blood sample (4ml) was sent for Serum Lipid profile analysis [Triglyceride (TG), Total Cholesterol (TC), HDL, LDL & VLDL]. Based on lipid levelsControl group[normal lipid profile] and study groups [abnormal lipid profile] were made.The women were followed up till 48 hours after delivery. Outcomes measured were difference in mean lipid levels in study and control group and accuracy of abnormal lipid profile to predict Pre-eclampsia.

Results: The incidence of pre-eclampsia in our study was 11.13%. The mean serum total cholesterol[study group-199.74mg/dL vs control group-171.7mg/dL, pvalue <0.05] and VLDL[study group-51.29mg/dL vs control group-37.08mg/dL, p value <0.05] was significantly higher in pre-eclampsia subjects. The difference in mean triglyceride, HDL cholesterol and LDL cholesterol levels between two groups was not significant. Total cholesterol had 44.83% sensitivity, 84.85% specificity, 27.08% positive predictive value, 92.45% negative predictive value with diagnostic accuracy of 80.38%. Total cholesterol has 0.65% AUC with 95% Confidence interval. In the prediction of pre-eclampsia, VLDL cholesterol had maximum sensitivity of 68.97%, HDL cholesterol had maximum specificity of 86.15%.

Conclusion: Abnormal total cholesterol and VLDL levels have diagnostic accuracy of 80.38% and 49.23% respectively to predict Pre-eclampsia. Therefore, it can be concluded that Abnormal lipid profile in early second trimester is a good, non-invasive and economical test for prediction of pre-eclampsia.

Keywords: Pre-eclampsia, Cholesterol, Triglyceride, HDL, LDL, VLDL

[HRP0208]

Assessment of Maternal Abdominal Subcutaneous Fat Thickness (SFT) Measured by Ultrasound as An independent Predictor of Adverse Pregnancy Outcomes

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Introduction: The increasing rate of maternal obesity poses a major challenge to obstetric practice. Obese pregnant women are at increased risk for a variety of maternal and perinatal complications, which are increased with increasing degrees of maternal obesity. The maternal risks during pregnancy include Gestational Diabetes mellitus, Preeclampsia, increased caesarian sections. The fetus is at risk of stillbirth, preterm birth and congenital anomalies. The traditional methods of quantifying obesity are BMI, abdominal circumference, body fat percentage etc. BMI, being the most widely used tool, has various inconsistencies owing to age, gender, ethnicity and fat composition. But this study focuses on the use of Maternal abdominal subcutaneous fat thickness (SFT) as a surrogate measure for central obesity as measured by ultrasound, and determining its efficacy compared to BMI in predicting obesity related pregnancy complications.

Objective: Tomeasure mid-trimester SFT in antenatal women and establish SFT as an independent predictor of obesity related adverse pregnancy outcomes and to derive a correlation between Body Mass Index (BMI) and Subcutaneous Fat Thickness(SFT).

Methods: This was a prospective cohort study. 150 pregnant women between 20-40 years of age were recruited. Demographic data was collected about each participant at the first antenatal visit from the OPD. USG for abdominal subcutaneous fat thickness (SFT) was done at 18-22 wks period of gestation. All scans were performed by the same operator using a high-resolution multi frequency B-mode scan 2.5–5.0 MHz transducer. The participants were followed up to labour and adverse pregnancy outcomes were observed and their correlation with the SFT measured was studied.

Results: There was significant positive correlation between BMI and SFT1 (r=0.590, p<0.001), SFT2 (r=0.595, p<0.001), SFT3 (r=0.587, p<0.001) and average SFT (r=0.591, p<0.001) respectively suggesting moderately positive significant correlation between BMI & SFT. A positive correlation was noticed between BMI and adverse pregnancy outcomes such as PIH, GDM, preterm birth, postdatism and NICU admissions. We also discerned that SFT independently showed a positive correlation with the above parameter. The mean SFT among women without PIH was 11.45 mm whereas the mean SFT of women with PIH was 16.48 mm[p <0.001]. Mean SFT were 11.68mm and 16.24 mm among the ladies without and with GDM respectively [p<0.001]. The mean SFT for term pregnancies was 12.06 mm whereas the mean SFT for preterm births was 14.21 mm showing an average increase of 2.2 mm, showing positive correlation between SFT and preterm birth. SFT also showed positive correlation with nee for NICU admission for neonates [SFT avg being 11.72mm and 14.94 mm in the 2 groups]. A comparative analysis was done between BMI and SFT regarding their correlation to the various outcomes. SFT showed

higher correlation coefficients for these variables than BMI, with lower p values suggesting more statistical significance.

Conclusion: This study demonstrated that obesity is a morbid condition causing multiple adverse outcomes in pregnancy. There was a positive correlation between SFT and BMI hence establishing SFT was a maker of obesity. BMI showed a positive correlation with adverse pregnancy outcomes in mother as well as fetus, SFT showed greater and more statistically significant correlation for adverse outcomes. Thus it was concluded that SFT is a better independent predictor of obesity related adverse pregnancy outcomes.

Key words: Obesity, Body Mass Index[BMI], Subcutaneous Fat Thickness[SFT], GDM, Pre-ecclampsia, Preterm

[HRP0209]

Amniotic Fluid Lactate Dehydrogenase: A Reliable Marker for Subclinical Chorioamnionitis in Preterm Premature Rupture of Membranes

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Introduction: Preterm PROM(PTPROM) is strongly associated with clinical and subclinical (histological) chorioamnionitis and neonatal infections. Prevalence of subclinical chorioamnionitis in preterm PROM varies from 50-70%. Subclinical chorioamnionitis is difficult to diagnose hence quest is on for search of a reliable marker. In present study we evaluatedamniotic fluid lactate dehydrogenase (LDH) in relation to subclinical chorioamnionitis.

Objective: To study the association of amniotic fluid LDH level with histologically diagnosed subclinical chorioamnionitis in PTPROM.

Method: In this prospective study, vaginally obtained amniotic fluid samples were collected at admissionin 115 women with PTPROM at 28+0to 33+6 weeks of gestation after fulfilling inclusion and exclusion criteria. LDH was measured by spectrophotometric analysis. Management was as per standard hospital protocol. Most of the women went into spontaneous labor or were induced at 34weeks or earlier if obstetrically indicated. Histopathological examination of placenta was performed to diagnose histological chorioamnionitis.

Results: 58 women (50.4%) had histological chorioamnionitis. Of them 10 women also had clinical chorioamnionitis and rest 48 women had subclinical chorioamnionitis. Mean concentration of amniotic fluid LDH was higher in women with histologic chorioamnionitis than in women without (2144.53IU/L vs. 580.39 IU/L, p = 0.001). The optimal cut-off of LDH for histological chorioamnionitiswas 1034 IU/L (sensitivity 93.1%, specificity 91.2%, positive predictive value 91.5% and negative predictive value 92.9%). The mean amniotic fluid LDH in women with puerperal sepsis was significantly higher than women without sepsis (3928.68IU/L vs 1008.7IU/L). Similarly, mean amniotic fluid LDH was significantly higher in neonatal sepsis.(5464.80IU/L vs 983.32 IU/L).

Conclusion: Amniotic fluid lactate dehydrogenase is elevated in women with histological chorioamnionitis. Amniotic fluid LDH cutoffs of 1034 IU/L may be used to triage women who are at risk of developing subclinical chorioamnionitis so that early delivery can be initiated.

[HRP0210]

Covid-19 in Pregnancy

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COVID pandemic had a major impact on health system and societies worldwide. The antenatal patients and neonates does not appear to be at a higher risk due to COVID but the management has definitely been changed. The COVID infection is a zoonotic disease and is spread by respiratory droplets. The most frequent symptoms are: fever, cough, myalgia and shortness of breath. Diagnosis is made by upper respiratory tract swab testing, HRCT Chest and basal echocardiogram.

All the women are advised to attend the routine antenatal care tailored to minimum; at 12,20, 28 and 36 weeks. Women with symtoms must be deferred until 7 days after the start of symptoms. Feta growth is monitored by doppler every fortnightly the infection can be mild, moderate or severe. The mild/asymptomatic cases are managed by home isolation for 14 days and adequate hydration needs to be maintained in addition to temperature, SPO2 monitoring and follow up is done after 24-48 hours by telemedicine appointment.

For moderate to severe cases, hospital admission is advised where along with supportive therapy, thromboprophylaxis is also given. Interferon alpha, lopinavir, hydroxy chloroquine, azithromycin, ivermectin and low molecular weight heparin should be given after careful risk and benefit assessment. In cases where patient present with shock or there is a need for mechanical ventilation; ICU care is needed.

The obstetrical management will remain the same and vaginal delivery is still the preferred mode of delivery unless maternal condition demands caesarean section. Termination of pregnancy should preferably be carried out once the patient is RT-PCR negative.

In postpartum period the baby should be isolated and exclusive breast feeding should be continued with proper protection. Thromboprophylaxis should be continued for 10 days postpartum. Followup is done by tele follow ups and if needed, in person appointment is scheduled at the end of infective period.

Keywords: Ivermectin, Hydroxyl Chloroquine, Pandemic Telemedicine.

[HRP0211]

Study of Estimation of Vitamin D in First Trimester Pregnancy

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Introduction: Vitamin 25(OH) D3 is a main regulator of a gene named HOXA10, essential for the regulation of the endometrial development and receptivity during the window of implantation and fertility. Vitamin D in early pregnancy promote successful embryonic and feto-placental development. Its deficiency may negatively impact on uterine lining. Vitamin 25(OH) D3 regulates genes involved in trophoblast invasion and angiogenesis, key mechanism in embryo implantation and placenta function, thus supporting fetal growth and development.

Objective: This studywas undertaken to determine the Vitamin25 (OH) D3 level in first trimester of pregnancy in women with history of recurrent early Pregnancy Loss and to compare it with Vitamin 25(OH) D3 level in first trimester of pregnancy in women with no history of recurrent pregnancy loss.

Methods: In the study 120 women with first trimester pregnancy were enrolled and divided into two group of 60 patients in each group: Cases (previous history of RPL) and Control (without history of RPL). All patients have fulfilled the inclusion criteria were assessed clinically and sonographically. 2 ml of blood was drawn by ante-cubital vene-puncture and collected in a plain vial, and estimated for Vitamin 25(OH) D3.

Results: Our resultshowed that the mean ±SD of Vitamin D3 Level (ng/mL) in Case group was 16.19 ±11.26 and in control was 14.59 ±9.53.There was no significant difference between the groups in terms of Vitamin D3 Level (ng/mL) ($p = 0.276$). In the study, maximum number of participants had continued their pregnancy beyond 14 weeks in both group. 40.0% of the participants in the Case and 23.3% in control group had Pregnancy Loss. The total 93(77.5%) participants out of 120 had the deficient level of vitamin D3 out of which 55 (59.1%) of the participants were continued their pregnancy up to 14 week and 38(40.9%) aborted the pregnancy. The mean value of vitamin D3 (ng/ml) was 18.77 ±10.97 in pregnancy continue and 8.10 ±2.44 in pregnancy loss. There was a significant difference between patients in which pregnancy continued beyond 14 weeks as compared to the patients in which abortion occurred.

Conclusion: There was significant increase in abortion rate in women who had deficiency of vitamin D3 in both the group. Therefore it is concluded that vitamin D3 deficiency is a risk factor for first trimester pregnancy loss. The estimation of vitamin D3 level may be recommended in women who are planning to conceive and if found deficient then vitamin D3 supplementation may be advised.

[HRP0212]

Improving Care of Pregnant Women During Covid-19 Pandemic using Telemedicine Services

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Introduction: During COVID-19 pandemic a considerable thrust has been given to developing and facilitating the use of telemedicine services. This maybe especially useful in the context of pregnant women.

Objectives: We aimed to assess the baseline knowledge in pregnant women about COVID-19 infection, and the use of a mobile application as a part of a telemedicine system to provide information to patients and subsequently asses the improvement in knowledge and the patient satisfaction.

Methods: It was a prospective study carried out at a tertiary level hospital between April to July 2020.

"Swasthgarbh", a mobile application, which was already in use, was modified to serve as an educational platform and continued to provide telemedicine facilities to booked antenatal patients. Pregnant women who were already registered under this were recruited and contacted telephonically to assess their baseline knowledge about the disease. Subsequently, an education video was uploaded over the application and a month later feedback was taken from the patients and patient satisfaction, improvement in knowledge levels, and reduction in anxiety levels was assessed.

Results: Fifty six patients responded for the baseline survey with a mean age of 28.46 years and mean period of gestation 26 weeks. Among the various components assessed, awareness about the disease spread and symptoms was high (94.6%), while it declined significantly for the effect of the infection on pregnancy (67.9%). Anxiety due to the ongoing pandemic was reported by 85.7% of the patients with a mean anxiety level of 6.17.Feedback was taken from 47 patients. Patient satisfaction was assessed in terms of quality of antenatal care, ease of accessibility to healthcare system and the information provided, and mean satisfaction scores of 4.21, 3.66, 3.62 respectively, were obtained. The improvement in response rate as compared to baseline was assessed for those questions in which a deficiency in knowledge was previously identified.

The response rate was compared using theMcNemar's test and there was a significant improvement seen for all the components ($p < 0.05$). The mean pre and post knowledge scores were computed and a significant improvement in the scores was observed (6.25 vs 7.53; p= 0.0001)

Conclusion: Incorporating telemedicine into our current healthcare systems will minimize inequity and tear down barriers to access. It has the potential for use along a wide spectrum. Establishing evidence-based practices in this emerging dimension of health care delivery is important to mitigate potential health risks and for overcoming barriers to adoption of technological advances.

[HRP0213]

Method of Delivery of Baby and Maternal and Neonatal Outcomes in Second Stage Caesarean Sections

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Introduction: Cesarean delivery is defined as the delivery of a fetus through surgical incisions made through the abdominal wall (laparotomy) and the uterine wall (hysterotomy). The most common indications for primary cesarean delivery include labor dystocia, abnormal or indeterminate fetal heart rate tracing, fetal malpresentation, multiple gestation, and suspected fetal macrosomia.

Objective: To observe the method of delivery of baby andmaternal and neonatal outcomes in second stage caesarean sections.

Methods: It was a prospective observational study of sixty (60) patients,all singleton pregnancies with cephalic presentation >36 weeks gestation recruited from labour room who were planned for second stage caesarean section and first stage caesarean respectively over a period of one year. The patients with fetal growth restriction, antepartum haemorrhage and previous caesarean delivery were excluded.

The patients were observed intraoperatively for method of delivery of head and surgical complications during delivery. The

neonatal outcomes and postoperative outcomes of patients were also observed till their discharge from hospital.

Results: Of sixty cases of second stage caesarean section, thirty six (60%) were delivered by Patwardhan technique, twenty (33.33%) in cephalic, three (5%) by breech extraction and one (1.67%) by modified Patwardhan technique whereas of sixty cases of first stage caesarean section, fifty one (85%) women delivered in cephalic, seven (11.67%) by breech extraction, two (3.33%) by Patwardhan technique and none by modified Patwardhan technique. The intraoperative complications observed were haemorrhage in eight (13.33%), extension of uterine angles in nine (15%), bladder injury in one (1.67%) in second stage caesarean whereas haemorrhage in three(5%), extension of uterine angles in two (3.33%) and bladder injury in none in first stage caesarean section. In neonates nine (15%) had APGAR <7 at birth and nine (15%) required NICU admissions in second stage caesarean section whereas three (5%) had APGAR <7 at birth and three (5%) required NICU admissions in first stage caesarean section.Postoperatively six (10%) patients had puerperal pyrexia in second stage caesarean section whereas four (6.67%) had puerperal pyrexia in first stage caesarean section but none had wound sepsis in both sections.

Conclusion: Patwardhan technique was the most common technique of delivery of head in second stage caesarean sections and second stage cesarean was associated with more extension of uterine angles, haemorrhage and bladder injury. So expertise is needed in delivering of baby in second stage caesarean sections.

[HRP0214]

Is QF-PCR, for Prenatal Diagnosis of Chromosomal Abnormalities in Amniotic Fluid Samples, A Substitute for Conventional Karyotyping or Is It Complementary

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Introduction: Prenatal screening tests for aneuploidies are routinely offered to all pregnant women in most of the settings in order to determine their risk of fetal chromosomal abnormality. The most frequent aneuploidies prenatally diagnosed include Trisomy 21, 18 and 13 and sex chromosome aneuploidies. After screening, the high-risk cases are offered amniocentesis/ CVS for the diagnosis.

In spite of practicability of karyotyping as a cytogenetic technique for prenatal diagnosis of chromosomal aberrations in laboratories, this is associated with considerable limitations such as time-consuming and laborious cell cultivation, low resolution of the cell-treated field, and limitation in detection of chromosome abnormalities which are less than 5 mb in length. As a result, sophisticated substitutions like fluorescent in situ hybridization (FISH) and quantitative fluorescence polymerase chain reaction (QF-PCR) using uncultivated amniotic fluid came into picture.

This study therefore aims to evaluate the potential advantages and limitations of using rapid test (QF-PCR) as a replacement or as an adjunct to traditional karyotyping.

Methodology: It was a Prospective Observational Study done in the department of Obstetrics & Gynecology, AIIMS Jodhpur for one year. Ethical approval was taken from the institute and Informed consent was taken from all the participants. Amniocentesis or CVS was done as per the standard Protocol on women with high and intermediate risk for aneuploidy. Samples were divided into two parts, one for cytogenetics and other for molecular testing and sent to the accredited genetic laboratory specified for prenatal screening and diagnosis.Time of release of reports was noted from the day of procedure. The results were analysed and compared. Cases were followed for any procedure related complications.

Results: A total of 75 cases of amniocentesis and CVS were done in the last 1 year. Out of these, 58samples were sent for both QF-PCR and Karyotyping. Results were assessed. As far as aneuploidy was considered, QF-PCR had 100% sensitivity and 100% specificity in our study. However,when mosaics and other chromosomal rearrangements were also considered, QFPCR failed to detect these structural abnormalities and mosaicism. There were 12 abnormal cases with six cases diagnosed as Downs syndrome and one with monosomy X. Three cases found normal on QF-PCR actually had chromosomal rearrangements and one had mosaicism. In three cases the karyotype result could not be obtained due to microbial contamination and metaphase problem so these were excluded. Total 11/75 cases had amniocentesis for single gene disorders. There were three abortions, one preterm PROM and two had a bloody tap due to which karyotyping could not be processed.

Conclusion: QFPCR can be reliably used to detect aneuploidies. It is a rapid method, less labour intensive and requires less amount of amniotic fluid for isolating genomic DNA, hence, can be used in cases of oligohydramnios.Also, to curb the stress and anxiety among the expecting couple, QF-PCR is the best method. However, to have a complete mapping of chromosomes and identify structural abnormalities, karyotyping is required.

[HRP0315]

Study of Feto-Maternal Outcome of Patwardhan Technique for Deeply Impacted Fetal Head During 2nd Stage Caesarean Section

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Objective: To study the Feto-maternal outcome of Patwardhan technique for the delivery of deeply impacted fetal head during second stage caesarean section.

Materials and Method: It was a prospective observational study done on 60 women who were in second stage of labour undergoing caesarean section, after fulfilling all the inclusion and exclusion criteria. Patwardhan technique [Shoulder First method] was used for the delivery of deeply impacted fetal head. A record of maternal intraoperative and postoperative findings and neonatal findings were made. Maternal Outcome measures were extension of uterine incision (J-shaped, T-shaped, Lateral extension), intraoperative and postoperative complications. Fetal outcome measures were birth trauma, birth asphyxia and neonatal septicaemia.

Observations and results: Mean age of population was 25.02 ± 3.94.The mean heightwas 148.95±3.78 cm. Mean BMI was 25.89 ± 1.45kg/m^2.The mean duration of first stage and second stage of labourwas 13.21 ±2.97 (hours) and 2.40±0.44 (hours) respectively. Bladder advancement was seen in 63.3%, thinning of LUS (lower uterine segment) was seen in 70% and ballooning of LUS was observed in 33.3%. Intraoperative complications like Bladder injury (1 case), Extension of uterine incision (2 cases) and Postpartum haemorrhage (10 cases) were seen. Broad ligament haematoma was not seen. Post-operative complications like fever (13), paralytic ileus (6), prolonged catherization (9), wound sepsis (7), resuturing of stitch line (5) and prolonged hospital stay (12) were seen.There was a significant fall in haemoglobin level from 11.41 ±1.21 preoperatively to 9.58 ±1.06 postoperatively. Mean birth weight of neonates was noted as 3.13 ± 0.38 kg. APGAR score < 7 at the end of 1 min and 5 min was present 6 (10%) and 3 (5%) neonates respectively. Severe birth asphyxia and Respiratory distress was noted in 4 (6.67%) and 15(25%) neonates respectively. 10 neonates (16.67%) required resuscitationand 5 neonates (8.3%) required mechanical ventilation with IPPV.

Conclusion: Second stage Caesarean section is a complicated surgery predisposed to complications leading to feto-maternal morbidities. Use of Patwardhan technique for extraction of deeply impacted head in these cases, when done skilfully, lead tosignificantly lessercomplications than various other methods, with better feto-maternal outcome.

[HRP0316]

Placental Migration of Mid Trimester Low Lying Placenta: A retrospective analysis

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Introduction: Placenta previa is defined as a placenta that lies wholly or partially within the lower uterine segment. Approximately 1.5-4.2 % of placenta are found to be low lying on routine anomaly scan. This alarms the obstetricians regarding the possibility of placenta persisting in the lower uterine segment and its associated maternal and fetal morbidity and mortality.

Previous placenta previa, advancing maternal age, increasing parity, endometrial damage (previous dilatation and curettage), pathology like endometritis and uterine scars like previous cesarean section or myomectomy, Assisted Reproductive Technology and smoking increase the probability of placenta previa.

Objective

- To assess the prevalence of low lying placenta on routine antenatal ultrasound at 18-20 weeks of gestation and later at 38 weeks / at the time of delivery whichever is earlier.
- Evaluate the factors affecting placental migration especially the role of initial distance of placenta from os and probability of migration in future.

Methods: This was a retrospective study conducted in the Department of Obstetrics and Gynaecology, Max Superspeciality Hospital, Shalimar Bagh, New Delhi for a period from April 2019 to March 2020. Cases with singleton pregnancy having Level II USG done between 18-20 weeks and gestational age at delivery >28 weeks were included in the study. Demographic information, relevant history and examination findings were collected from the medical records. Routine Level II ultrasound done between 18-20 weeks gestation was recorded. Antenatal women with low lying placenta i.e. the distance between the leading edge of placenta and the internal os of less than 2 cm were followed until either the lower edge of the placenta migrated beyond 2 cm or the patient had delivered whichever was earlier. Data was analysed using Statistical Package for Social Sciences SPSS for windows.

Results: Out of the total 936 cases, only 72 (7.69 %) cases had low lying placenta in the midtrimester. Follow up of these 72 cases indicated that in 59 cases it had migrated to the upper segment at term / delivery. The migration of placenta was 92.30% (36/39 cases) and 79.31 % (23/29 cases) where the distance between the leading edge of the placenta and the internal os was > 1 cm and between 0.5-1 cm respectively .Migration was not observed in women where the distance was <0.5 cm or covering the os (0/4 cases). Placental migration was 75.75 % (25/33 cases) in anteriorly situated placenta and 87.17 % (34/39 cases) in posteriorly situated placenta. The rate of placental migration was 88.88 % (40/45 cases) in women who had previous normal delivery/ primigravida and 70.37 % (19/27 cases) in those with prior birth by cesarean section.

Conclusion: The prevalence of low –lying placenta in midtrimester was 7.69 %, which reduced to 1.38 % at term due to placental migration. The rate of placental migration was 81.94 % and in 77.77 % cases, migration was over by 32 weeks. Factors like the initial distance between the lower edge of the placenta and the internal os, placental position and previous obstetric history influenced placental migration and can be helpful in predicting the future outcome.

[HRP0317]

Maternal Miss Events in Covid Positive Pregnancy: A case series

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Introduction: COVID-19 has created an extraordinary global health crisis. The effect COVID-19 has on maternal and fetal health can be evaluated by analyzing maternal near miss(MNM) events that occurred in COVID positive pregnancies. Here we present 3 cases of maternal near miss in COVID positive pregnancies.

Case 1: A 28year old P3L3 female presented on day 8 of normal vaginal delivery(NVD) with puerperal sepsis in septic shock with COVID positive status. Her USG pelvis and chest X Ray were normal. She was running continuous fever and unable to maintain SPO2. She was put on high grade antibiotics and ionotropic support. On day 5 of antibiotics her fever subsided and she was put off ionotropic support. She recovered subsequently.

Case 2: A 22 year old P3L3 female was referred on day 3 of exploratory laparotomy (done for ruptured cornual pregnancy with hemoperitoneum) with haemorrhagic shock and burst abdomen with COVID positive status. She had already received 4 red cell concentrate(RCC) and was on ionotropic support

.A laparostomy bag was inserted, patient put on high grade antibiotics and transfused 1 more RCC. Patient gradually improved and was weaned off ionotropic and ventilator support. Her laprostomy closure was done subsequently.

Case 3: A 28 year old P4L4 female presented on day 8 of NVD with puerperal sepsis with acute kidney injury with septic shock with COVID positive status. She was running continuous fever and unable to maintain SPO2. Her Chest X Ray showed typical COVID changes and USG pelvis had retained products of conception. She was put on ionotropes, dilatation and curettage done and patient started on high grade antibiotics. She improved and is planned for discharge now.

Conclusion: COVID is a life threatening condition and as pregnancy itself alters the body's immune system and response to viral infections; the effect COVID has on pregnancy events needs to be closely evaluated. The uncontrolled spread of COVID in India needs better understanding of intervention points at which maternal mortality can be converted to near miss.

[HRP0318]

Obstetric Hysterectomy

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Introduction: Obstetric hysterectomy is a term used to describe removal of uterus performed at the time of cesarean section, following vaginal delivery or within the puerperium period or for complication following termination of pregnancy. This surgery was initially described in cases with massive obstetric hemorrhage, mostly due to uterine atony. Recently, with advances in medical and surgical field, preservation of uterus has been possible even in life threatening hemorrhage. However, obstetric hysterectomy is still performed as a life saving procedure. In this study we would like to highlight role of obstetric hysterectomy in current obstetric practice.

Objective: To study theincidence andindication of obstetric hysterectomy as primary outcome and risk factors, maternal characteristics, complications, perinatal outcome, morbidity and mortality as secondary outcomes.

Methods: Retrospective study of obstetric hysterectomies performed in a tertiary care hospital in 2 years from April, 2018 to March, 2020.

Results: In the study period of 2 years, 26 obstetric hysterectomies were performed out of 26500 deliveries, making the incidence of 0.98 per 1000. Out of 26 cases, 3 case files could not be retrieved so data analysis is done for 23 cases. The major indication of hysterectomies was found to be adherent placenta, present in 16 cases(69.56%). Second main indication was rupture uterus, 6 cases (26.08%) of hysterectomies. One hysterectomy was performed for pyometra (4.34%). From the available data, we observed that no hysterectomy was performed for atonic PPH. Previous cesarean delivery andmultiparity of ≥ 2 were major risk factors present in 20 cases (86.95%) and 15 cases (65.21%), respectively. Antenatal anemia was found in 19 cases(82.6%), making it an important maternal characteristic to be considered. Significant morbidity is associated with the procedure and 13(59%) cases needed ICU admission. There was one mortality observedin patient of obstetric hysterectomy which was indicated for obstructed labor with rupture uterus, the cause of mortality being massive hemorrhage with DIC andmultiorgan failure. Perinatal mortality was seen in 7 (30.43%) cases, while 14 cases (60.86%) had favorable neonatal outcome.

Conclusion: In this study, adherent placenta and rupture uterus were found to be major indications of obstetric hysterectomy. In all cases of adherent placenta and 4 cases (66%) of rupture uterus, previous cesarean deliveries were present. According to National Family Health Survey 3(2005-06) and 4(2015-16) the rate of cesarean deliveries in India has increased by 70% from 10.6% to 17.2%. This, increased rate ofcesarean deliveries is not just associated with increased morbidity in current pregnancy but also in future pregnancies. Thus, to reduce such morbidity it is must that every decision of cesarean delivery should be thoughtful and quintessential.

[HRP0319]

Maternal, Fetal and Neonatal Outcomes of Critically-Ill Pregnant Women infected with Covid-19

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Introduction: The recent pandemic of Coronavirus disease 2019 (COVID-19) caused by the novel coronavirus 2 (SARS-CoV-2) has been an emerging health threat worldwide. Its clinical course has been an enigma, especially in pregnant women, a highly vulnerable population. The mortality rate of covid-19 has been reported to be higher than the MERS and SARS combined. It is pivotal to understand the clinical challenges of Covid-19 to devise potential strategies for optimal feto-maternal surveillance and for providing intensive care.

Objective: The aim of this study was to observe the clinical course, maternal, fetal and neonatal outcomes in critically ill pregnant patients with Covid-19 infection in LNJP.

Methods: It was a combined retrospective and prospective observational study from April-September 2020 in the Department of Obstetrics and Gynaecology & Department of Anesthesiology, Lok Nayak Hospital, New Delhi.

Around 800 SARS-CoV-2 infected antenatal or postnatal patients were admitted in our hospital out of which 23 (2.87%) critically ill patients with confirmed SARS-CoV-2 infection or with high suspicion of COVID-19 were included in this study.

The inclusion criteria were (i) those admitted to the intensive care unit (ICU) who required mechanical ventilation or fraction of inspired oxygen (FiO2) of at least 60% or more (ii) shock identified either by the use of vasopressor therapy or elevated lactate levels (>2 mmol/L) despite adequate fluid resuscitation (iii) failure of other organs requiring admission to the intensive care unit (ICU).

Primary outcome was assessed in terms of maternal mortality and secondary outcomes in terms of obstetrical outcomes and fetal/neonatal outcomes, incidence of acute respiratory distress syndrome (ARDS) and proportion of patients requiring mechanical ventilation, acute kidney injury, hepatic failure, DIC.

Results: Twenty three critically-ill SARS-CoV-2 infected antenatal or postnatal patients were included in the present study. Ten

maternal mortality(43.47%) were observed out of which 6(60%) were antenatal. Out of these 23 patients, 8 (34.7%) had ARDS, 5 (21.7%) patients required mechanical ventilation, 2 (8.69%) experienced acute kidney injury, 2 (8.69%0 had hepatic failure and 1 (4.34%) had DIC. However, out of 23 critically-ill, 5 (21.7%) antenatal patients recovered from Covid-19 infection and were transferred to non-covidcentres for further antenatal care. Out of the remaining 18 patients, 12 delivered (5[41.67%] patients delivered vaginally and 7 [58.33%] underwent Caesarian section) and 6 patients expired. On further analysis of the 12 delivered patients, 3 (25%) had preterm delivery, 2 (16.67%) had intra-uterine demise of the fetus and 2 (16.67%) had neonatal deaths. Further analysis is under process.

Conclusions: Our study showed an increased rate of caesarian section, preterm delivery and maternal mortality among critically ill patients. Involvement of multi-disciplinary team in the management considerations of these patients is vital. We suggest that large prospective cohort studies are need of the hour to develop potential strategies for intensive care management and feto-maternal surveillance in the critically ill Covid-19 patients.

[HRP0320]

Ophthalmic Artery Peak Ratio: A Novel Marker of Feto-Maternal Outcome in Severe Pre-Eclampsia

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Introduction: Pre-eclampsia is a pregnancy related complication which is characterised by placental dysfunction arising from defective remodelling of the uterine spiral arteries in early gestation. There is a growing body of evidence that the maternal hemo-dynamics outside the uteroplacental unit mayhave an important role to play in the pathogenesis of pre-eclampsia. Therefore assessment of the vascular beds outside the uteroplacental unit is an alternative adjunct for assessment of the disease process.

Oxidative stress and endothelial dysfunction leads to hyper perfusion of central nervous system vasculature in preeclampsia. This CNS insult alters the cerebral autoregulatory mechanism and results in vasodilation.Due to the functional, embryological and anatomical similarities with intracranial vessels, doppler ultrasound of the ophthalmic artery is an indirect method to assess the cerebrovascular perfusion and might give an insight into the altered hemo-dynamics of the cerebral circulation.

Objective: To study the relation of ophthalmic artery doppler indices with feto-maternal outcome in women with early onset severe pre-eclampsia.

Material and Methods: This cross-sectional study included60 women in the age group 20-35 years with early onset severe pre-eclampsia. The Ophthalmic artery Resistivity index (RI), Pulsatility index (PI) and Peak Ratio (PR) were measured at admission and 5 days postpartum. The Peak Ratio was calculated manually as the ratio of the Peak diastolic velocity and the initial peak i.e. Peak systolic velocity(PSV).

The women were evaluated for adverse maternal outcome during the antenatal, intranatal and postnatal period. The adverse maternal outcome monitored were the development of eclampsia, HELLP, partial HELLP, DIC, acute renal failure, pulmonary oedema, abruption and cerebrovascular accidents. The neonates were monitored for adverse foetal outcomes like, small for gestational age (SGA) and intrauterine death.

Based on peak ratio, the participants were divided into two groups i.e. Group I – women with PR<0.89 and Group II women with PR≥ 0.89. Maternal and foetal outcomes were compared between group I and group II.

Results: In the present study, overall maternal complications were found to be more in women with Peak Ratio>0.89 (GroupII)(59.52% Vs 40%). Partial HELLP was the most common complication seen in 38.89% in group I and 54.76% in group II. Overall maternal complications were observed in 44.4% in group I and 59.53% in group II. Group II had significantly more small for gestational age babies (SGA)(p<0.002).

The Peak Ratio was significantly higher in pre-delivery period as compared to post-delivery period(p<0.001).

Conclusion: The maternal complication were higher in women with increased ophthalmic artery peak ratio however it was not significantly significantdue to the small study population. Small for gestational age babies were significantly more in high peak ratio group. There was a restoration of normal peak ratio and hence normal cerebral vasculature hemo-dynamics in the post delivery period.

[HRP0321]

Maternal Neonatal Outcomes in Covid Negative and Covid Probable Obstetric Women Presenting with Covid Like Symptoms

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Introduction: Covid19 infection in obstetric women may have variable presentations ranging from influenza-like illness to severe acute respiratory illness. These may also be seen in non-Covid conditions e.g bacterial pneumonia, pulmonary edema or tuberculosis. Despite similarity in clinical presentations the outcome may be different for these conditions.

Objectives: To study maternal and fetal outcomes in Covid negative and Covid probable with Covid like symptoms.

Methodology: It was a retrospective study of 130 obstetric women who presented with Covid like symptoms in the month of April to June 2020. All women were tested for severe acute respiratory syndrome coronavirus 2 (SARSCoV-2) using reverse transcription–polymerase chain reaction test via nasopharyngeal swab. They were divided in three groups on the basis of report as Covid negative (CN), probable (CPro) and positive (CP). Individual case records were analyzed and information gathered.

Results: Majority of the women were Covid negative 99/130 (76%). Rest were Covid positive 22/130 (16.9%) and Covid probable were 9/130 (6.9%). In all groups, majority of women had mild disease (65.3%). Severe disease was present in 18.1%,

13.6% and 33.3% in CN, CP and CPro groups respectively. Fever and sorethroat were the most common presenting symptoms in all the groups. Chest Xray changes were observed in 12.1% CN, 22.7% CP and 33.3% in CPro group. The commonest chest Xray finding was lung consolidation in CN, bilateral peripheral opacities in CP and ARDS in CPro groups. The oxygen requirement was maximally seen in CPro (55.5%) followed by CP (36.3%) and CN (28.8%). Multi organ involvement was present in CPro (44.4%), followed by CP (31.8%) and CN (25.2%) groups. Overall, there were 21(16.1%) maternal deaths, commonest cause being ARDS with multiorgan dysfunction. The live birth rate was comparable in all groups; however, stillbirths were more in Covid positive group.

Conclusion: In the beginning of pandemic the threshold for admission of obstetric women presenting with Covid like symptoms was low; three-fourth of these women came out to be Covid negative. A small subset of these admitted women were labelled as Covid probable due to inconclusive or no testing. This group had the highest morbidity and mortality amongst all. It is likely that further testing in these women could have picked the Covid disease in them.

[HRP0422]

Maternal and Fetal Outcomes in Earlyand Late Intrahepatic Cholestasis of Pregnancy

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Background: Intrahepatic cholestasis of pregnancy (IHCP) is a reversible cholestatic disease presenting in second or third trimester of pregnancy with typical symptoms of pruritis with predilection for palm and soles. IHCP is associated with adverse fetal and maternal outcome, gestational age at the onset of disease and maternal serum bile acid levels affect the adversity of fetomaternal outcomes.

Objective: To study maternal and fetal outcomes in early and late Intrahepatic cholestasis of pregnancy and its correlation with maternal serum bile acid level.

Methods: This was a prospective observational study conducted during a period of 18 months in Department of Obstetrics and Gynaecology, ESI PGIMSR, New Delhi from September 2018 to March 2020. Feto-maternal outcomes and serum bile acid levels were observed in a total of 196 patients diagnosed with Intrahepatic cholestasis of pregnancy (IHCP) The study groups were divided into early and late IHCP depending on their gestational age at the time of diagnosis. Out of 196 patients, 156 antenatal women diagnosed after 32 weeks of period of gestation were grouped under late IHCP whereas 40 patients diagnosed at ≤ 32 weeks belonged to thelate IHCP group. Feto-maternal outcomes such as mode of delivery, post partum hemorrhage, blood transfusion, prolonged hospital stay, maternal mortality, preterm birth, birth weight, APGAR score, meconium staining of amniotic fluid, admission to NICU, Intrauterine death, neonatal mortality and its association with maternal serum bile acid levels were compared between the two groups.

Result: The median gestational age at diagnosis was 36 weeks. Earlier onset of IHCP ≤ 32 weeks is associated with higher rates of adverse feto maternal complications as compared to late IHCP > 32 weeks such as, cesearen delivery (60% vs 30.13%), instrumental delivery (12.50 vs 3.85%), postpartum hemorrhage (22.50% vs 5.77%), prolonged hospital stay (25 % vs 5.77%), blood transfusion (12.50 vs 2.56%), low birth weight (35% vs 8.97%), low APGAR scores (30% vs 5.13%), meconium stained liquor (35% vs 14.10%), preterm (72.50% vs 20.51%) ,neonatal death(20% vs 3.85%), NICU admission (52.50% vs 12.18%)Intrauterine demise (10%vs 1.28%). The rates of adverse outcomes increased with increasing maternal serum bile acid level.

Conclusion: Early IHCP (≤ 32 weeks) and raised maternal serum bile acid level is associated with higher rates of adverse fetomaternal outcomes in comparison to late IHCP (>32 weeks).

[HRP0423]

Double The Giggles, Sometimes Doubles The Trouble Twin Pregnancy and Its Fetomaternal Outcome: A two year study

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Introduction: The incidence of twin pregnancy has shown to increase over the decade because of delayed marriage prompting to the high incidence of subfertility. With the increased number of patients undergoing IVF, there has been an increased incidence of multiple pregnancies. Twin pregnancies represent for 2 to 4% of the total number of births.

Multiple gestation is considered a high-risk pregnancy. Currently, multiple gestations constitute up to 3% of all pregnancies. In India, up to 1% of the pregnancies are twin gestation and 10% of perinatal mortality can be attributed to twin pregnancies.

The obstetric complications of multi-fetal pregnancy incorporate preterm labor, preterm premature rupture of membranes, anemia, pregnancy-induced hypertension, postpartum hemorrhage, etc.

Because of differences in the incidence of twin pregnancy and its related complications in terms of maternal and foetal outcomes, this retrospective study has been initiated at PGIMS, Medical College, Rohtak.

Objective: To determine the incidence of twin pregnancy, its related socio-demographic factors, and Feto-maternal outcome.

Methods: This was a retrospective record-based study conducted in the obs and gynae department of pt B.D Sharma PGIMS, Rohtak which is a tertiary care center in the Rohtak district of Haryana over a period of 2 years from January 2018 to December 2019. Hospital records were analyzed. Maternal demographicfactors, Obstetrical associated complications and fetal outcome were also recorded.

Results: During the duration of the study period twin delivery ratewas 11.4 % per 1000 live births or 1.14 %. Most of the patients (56.1%) belongs to an age group of 21-25 years.

Most of the patients (42.3%) were primigravida,belong to low socioeconomic status.71.5 % of patients were housewives.Only 8.4% of patients conceived through IVF, the rest of them were spontaneous conception.

64.6% patients delivered between 32-37 weeks of gestation.

Only 9.2% of patients were delivered beyond 37 weeks of gestation.Most common type of chorionicity was Di amniotic Dichorionic (66%). 63.8% of patientsunderwent spontaneous vaginal delivery. Assisted breech delivery was conducted in 11.5% of patients because of 2nd twin with breech presentation and in 23% of patients, the cesarean section was done. Most common presentation was vertex-breech (37.6%), Transverse cephalic, and transverse-transverse were the least common presentation. Anemia (48%) was the most common complication in the present study. Preterm labor resulting in preterm delivery was found in 69.2% of patients.Other associated complications were PROM (20%), PIH(17%), post-partum haemmorgahe(8.4%), abruptio(3.8%), IUGR(3.8%), Gestational diabetes(1.5%) and so on. Out of 520 newborn babies, 39.6% were admitted to nursery. 69.2% of babies were delivered with a birth weight less than 2.5 kg, and 36% with an APGAR <7 at 5 min.

Perinatal death was reported in 24 fetuses (4.6%).

Conclusions: "It's double the giggles and double the grins, and also double the trouble if you're blessed with twins." Hence, in our study we have concluded that Twin pregnancy can have adverse maternal and fetaloutcome, Therefore there should be awareness and special antenatal care in such patients so as to avoid and timely detect the complications that can be arise due to twin pregnancy.

[HRP0424]

Von Willebrand Disease Complicating Pregnancy: Obstetrician'S Challenge

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Introduction: Von Willebrand disease is the most common inherited bleeding disorder. It occurs due to deficiency or defect in von willebrand factor (VWF) which is a large multimeric protein that mediates platelet adhesion and acts as a carrier protein for factor VIII. Of the three major types, Type 1 is the result of a partial, quantitative deficiency of a structurally normal VWF accounting for 70-80% of all VWD patients. Type 2 includes several qualitative defects in VWF that affect its multimeric structure or function. Patients with type3 VWD have complete deficiency of VWF and a secondary severe deficiency of FVIII. Clinical symptoms are characterized by mucous membrane and soft tissue bleeding, bleeding after surgery and rarely joint and gastrointestinal bleeding. There is a higher frequency of symptomatic VWD in women because of the haemostatic challenges of menses, pregnancy and delivery. Pregnancy in these women requires specialised and individualised management provided by a multidisciplinary team of obstetricians, haematologists and anaesthetists.

Case Report: A 30 year old, G2P1L2 at 6weeks of gestation was admitted for medical termination of pregnancy. She was diagnosed with VWD (type I) at 15 years of age during evaluation for menorrhagia since menarche following which tranexamic acid was used during her menses. She had occasional gum bleeding and epistaxis. Her emergency preterm LSCS was done three years back at 32 weeks in view of monoamnioticmonochorionic twin pregnancy with preeclampsia. Her factor VIII levels were 35% of normal and VWF Ag levels were 57% of the normal. She had postpartum hemorrhage for which she received multiple blood transfusions along with factor VIII and cryoprecipitate. She also required mechanical ventilation and ICU stay in the postoperative period for four days.

During the present pregnancy, her investigations revealed Hb 8g, TLC 9380/mm3, platelet count 2.67 lakhs. USG revealed a single live fetus of 6 weeks. Hematology consultation was done and factor VIII assay was found to be 50% of the normal and VWF Ag levels was 18% of the normal. Intermediate purity factor VIII in the dose of 14,000 units was started two days prior to suction evacuation along with Injection tranexamic acid 1 gm thrice a day. The aim was to achieve 100% correction of VWFAg levels prior to the procedure. On the day of suction evacuation, her factor VIII levels were 90% of the normal. Suction evacuation was done uneventfully following which intermediate purity factor VIII was transfused for another 7 days to reduce the risk of delayed bleeding. Injection tranexamic acid was continued for 5 days. The patient was then discharged in stable condition and asked to follow up in hematology OPD after 1 week.

Conclusion: Von willebrand disease complicating pregnancy poses a serious challenge to the obstetricians. Close surveillance and frequent hematological review, including measurement of VWF/FVIII is advisable to determine the need for additional treatment prior to any planned pregnancy event. Bleeding may sometimes occur even with normalisation of these factors. Antifibrinolytics play a significant role as an ancillary treatment.

[HRP0425]

Communication with Covid Positive Obstetric Patients Admitted in Trauma Centre – A quality improvement study

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Introduction: Effective doctor-patient communication is a prerequisite for a successful and robust healthcare delivery system function and for building a therapeutic doctor – patient relationship. Good doctor-patient communication has the potential to help regulate patient's emotions, facilitate comprehension of medical information and allow for better identification of patients needs, perception and expectations. In developing countries such as India, Doctors are often overwhelmed by the numbers of patients and their family members that have to be catered to. Studies on doctor-patient communication have demonstrated patient discontent even when many doctors considered the communication adequate. Amidst the COVID crisis, lack of specific policies, awareness, sensitization, time constrains, ineffective referral systems and places to communicate are some of the factors that further lead to patient and their relatives being disgruntled with healthcare services.

Aim: To establish practice of daily clinical briefing session for COVID positive obstetric patients and their relatives admitted in trauma centre from the current baseline to 70% over 4 weeks.

Methods: first we did Fish bone analysis focusing on the 4P's. These 4P'S are Policy, People, Procedure, and Place. We developed the questionnaire for assessing communication skills among healthcare providers. Our baseline result is 25%. We will do PDSA Cycle.

[HRP0426]

Management of Cesarean Scar Pregnancy: A Challenge

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Objective: To report outcome of surgically assisted medical management of six patients of Cesarean Scar Pregnancy.

Method: A total of six patients were included in the study. First four patients were referred to our institute, with bleeding at time of dilatation and curettage done for medical termination of pregnancy (MTP). Patients were hemodynamically stable at admission. We diagnosed cesarean scar pregnancy on ultrasound in all three pregnancies. They were treated with ultrasound guided intralesional methotrexate administration along with systemic (intravenous) methotrexate. Fifth patient had a live, 10 weeks period of gestation, cesarean scar pregnancy. She was managed with ultrasound guided fetal intracardiac instillation of potassium chloride (KCL) along with intravenous methotrexate. Sixth patient was at 9 weeks period of gestation. We managed her with suction and evacuation along with intracervical foley insertion followed by intravenous methotrexate.

Result: Mean period of gestation at diagnosis was 9 weeks 5 days. Mean serum beta HCG at diagnosis was 15780 U/L. Mean time taken for normalization of beta HCG levels was 25 days in all 5 patients. Four patients had an absolutely uneventful course. Mean time for disappearance of lesion on ultrasound was 95 days in these patients. Fifth patient presented to casualty 23 days after the procedure, with bleeding for two days and in hemorrhagic shock. Patient was taken for emergency laparotomy and cesarean scar ectopic excision. But in view of torrential hemorrhage, hysterectomy had to be done. Sixth patient is still under follow up after 45 days of procedure. Lesion still persists although size has decreased by almost 50%.

Conclusion: Surgically assisted medical management of cesarean scar pregnancy is effective, can avoid a major surgical intervention albeit associated with risk of bleeding. Management strategy should be decided upon only after detailed discussion and informedconsent by the patient.

[HRP0427]

Role of Platelet Indices in Evaluation of Thrombocytopenia in Pregnancy

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Background: The objectives of this study were to study the platelet indices in pregnant women diagnosed with thrombocytopenia and its association with aetiology as well as to study maternal and fetal outcomes in these women.

Methods: This was a prospective case control study where 900 pregnant women irrespective of period of gestation were recruited. Finally, after exclusion 100 cases and 100 controls were followed. Serial Platelet indices were performed in every trimester, during delivery and postdelivery. Platelet indices done at first ANC visit were taken as baseline.

Results: Prevalance of thrombocytopenia in our study is 13.3% (120 pregnant women). Out of this gestational thrombocytopenia contributed 89% followed by anaemia 5%, gestational hypertension 4% and autoimmune thrombocytopenia 2%. 95 % of cases were diagnosed with thrombocytopenia in second trimester. Mean of MPV and PDW in women with thrombocytopenia was (MPV=11.05+1.21fL) and (PDW = 15.54+2.69fL) significantly high as compared to nonthrombocytopenic women (MPV=9.88+0.81fL) and (PDW=13.40+0.70 fL). Mean of MPV was significantly higher in women with preeclampsia (13.6 fL) as compared to other causes of thrombocytopenia like women with anaemia (mean of MPV 12.6 fL), gestational thrombocytopenia (11.21 fL) and ITP (11.55 fL) during early gestation. PDW was higher inwomen with anaemia (21.36 fL) as compared to other causes of thrombocytopenia. Thrombocytopenia also represented a risk factor for low-mean birth-weight newborns 2.72±0.28 gm ($p<0.01$) and for premature delivery ($p<0.04$). There was an association found of cord blood platelet count with the maternal platelet count.

Conclusions: Mean of MPV and PDW in women with thrombocytopenia was significantly high as compared to nonthrombocytopenic pregnant women. Mean of MPV was significantly high in preeclampsia and PDW was maximally elevated in the women with anaemia as compared to other causes of thrombocytopenia So, respective platelet indices can be used as a marker to differentiate the respective aetiology of thrombocytopenia. Thrombocytopenia in pregnancy was associated with increased perinatal morbidity, with the strongest association for both prematurity and low-birth-weight: the lower the platelet count, the higher the risks for the fetus/newborn.

Keywords: Mean Platelet Volume, Platelet Distribution Width, Plateletcrit, Gestational Thrombocytopenia, Gestational Thrombocytopenia.

[HRP0428]

Covid-19 Reinfectionin Pregnant Women - Waiting for certainty on antibodies

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Introduction: COVID 19 infection is caused severe acute respiratory syndrome corona virus-2. Following infection, detectable IgG and IgM antibodies are produced with in few wks of symptoms. Why some individuals do not develop a humoral response, as reflected by antibody production is a matter of debate. Adding to this uncertainty is the unclear relationship between clinical symptoms and antibody generation. Higher antibody generation has not always been corelated with a much faster clinical outcome but what is needed here is to include antibody testing in protocols specially for those patients where there is a possibility of reinfection.

Objective: To analyse the possibility of COVID 19 reinfection in pregnant women and need for antibody detection.

Material and Method: This was a descriptive cross- sectional study that included total of 56 pts selected consecutively attending the gynae emergency with complaints of fever and

sore throat over the period of 4 mths. Relevant information was obtained from all the pregnant women using an administered questionnaire method.This data was analysed and presented in simple tables and charts.

Results: All the patients were subjected to relevant laboratory investigations including RT-PCR, CBC, LFT, KFT and coagulation profile. Out of these 56 pts 22 pts were RT-PCR positive who were symptomatic also. National guidelines were followed to treat and isolate the patients. After the average duration of 8 wks, 5 pts returned to the facility and were fully investigated again. One patient was running high grade and 4 presented with low grade fever. None of them were RT-PCR positive, but had mildly raised liver enzymes. Two pts were widal positive and for 3 pts no reasons could be detected. There was no laboratory investigation available to detect the levels of antibodies in these patients in our set up.

Conclusion: COVID 19 is not yet fully understood and definitive data on post infection immunity is lacking. Amidst the uncertainty of this public health crisis, thoughtful and appropriate methods will be essential to reform public health policy. Also this is necessary for the public health authorities to investigate the cases of recurrence to determine that though remote, recurrence is a possibility. One must also keep in mind, the possibility of false positivity and false negativity of the laboratory tests available. This phenomenon actually complicates the clinical and the epidemiological interpretation on test results, especially when serology does not have high specificity. Serological assays are rapidly increasing for SARS Cov 2 antibody testing and must be available for all, including those that are asymptomatic.

[HRP0529]

Predictors Of Maternal Near Miss in Eclampsia

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Introduction: Eclampsia is important complication of hypertensive disorders of pregnancy with high maternal morbidity. However with appropriate management at a tertiary level most of them recover. A group of eclamptic women may turn very sick as near miss.

Objective: To study the predictors of maternal near miss in women with eclampsia.

Methods: This was an analytical descriptive study including 26 women with eclampsia who had maternal near miss as per WHO criteria admitted in Smt Sucheta Kriplani Hospital maternity wards, labour room and emergency wards from 1st November 2018 to 31st March 2020. Detailed history, examination andinvestigations were done. The hospital course and maternal and perinatal outcome was observed. The causes responsible for maternal near miss and evaluation of avoidable factors which led to maternal near miss morbidity were studied.

Results: Total 48 cases had eclampsia out of which 26 had near miss. Mean age 24.2+/-4.7years, 28% did not have antenatal care. 53.8% cases had early onset hypertension at <34 weeks. 61.5% severe HTN, 23.07%moderate HTN and 15.3% mild HTN. 12 cases presented with near miss at admission among which 11 due to uncontrolled seizures and 1 due to severe thrombocytopenia. 2 cases developed uncontrolled seizures antenatally and 1 had intra-natally during hospital stay. 11 cases had near miss post LSCS due to intra operative high BP, poor respiratory efforts and general condition leading to ICU admissions. Mean age 24.2+/-4.7years, mean Haemoglobin 9.64g/dL and 28% did not have antenatal care. Mean total protien was 5.8+/-0.9g/dl, mean serum albumin was2.7+/-0.5, blood urea 30.64+/-12.09, serum uric acid 7.97+/-1.41mg/dl, 80% patients had cesarean section and the mean gestational age at delivery was 34.75+/-3.25 weeks.

Conclusion: We conclude young age, early onset of pre eclampsia, lack of antenatal care, persistent seizures, thrombocytopenia, hypoprotienemia and high serum uric acid were predictors of near miss.

[HRP0530]

Challenges During Caesarean Section Incovid Patients

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Introduction: Caesarean sections (CS) are unavoidable surgeries during corona pandemic (caused by SARS COV - 19). This is our experience of managing these patients along with maintaining the safety of health care workers.

Objective: To study the challenges of caesarean sections and perinatal outcomes in Covid-19 positive patients.

Methods: Retrospective and Prospective observational study was conducted from April to September 2020 in the Department of Obsterics and Gynaecology, MAMC & Lok Nayak Hospital, New Delhi. COVID-19 positive pregnant women admitted in the OBGY Covid ward undergoing Caesarean sections were studied after obtaining a written informed consent to participate in the study. Obstetrics management was done according to the hospital protocols. Challenges experienced preoperatively and intra operatively while performing caesarean section in view of COVID-19 infection were noted. Complications of anesthesia and surgery (caesarean section) and impact of surgery on maternal and fetal outcomes were also noted and statistical analysis was performed.

Results: During the 6 months period there were 310 deliveries and 134 (43.2%) caesarean sections out of which 22 were elective sections and 118 were emergency sections. Most common indications of caesarean sections were previous LSCS with scar tenderness (38; 27%), and Fetal distress (18; 12.4%).

On Interim analysis, Challenges faced during caesarean in Covid patients were-

Preoperative: Difficulty in arranging blood and blood products (12%), technical difficulties in shifting of patient to operation theatres (14%).

Intraoperative: Decreased visibility due to fogging of goggles (23%), Prolonged duration of Anaesthesia (8%), exhaustion of health care workers due to hot and humid weather (21%).

Post operative

Improper doffing area (7%)

Wound site infections(2.8%)

Secondary PPH (1.4%)

Paralytic ileus (1.4%) Agitation and increased restlessness among patients and relatives due to prolonged hospital stay.

Fetal outcome- 5% neonates were Covid positive post CS with no other complications.

None of the doctors (Surgeons and Anaesthetists) were infected after the procedure.

0.5% health care workers (Nursing staff and Orderly) working in operation theatre were infected with Covid infection.

Conclusion: Initially there were many new challenges faced during caesarean section of Covid positive patients which has gradually decreased over time with more experience resulting in good perinatal outcome.

There was no significant risk of infection to health care workers during caesarean sections of Covid patients.

[HRP0531]

Posterior Reversible Encephalopathy Syndrome: Demographic, Clinical and Radiological Manifestations and Feto-Maternal Outcome

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Background: Posterior reversible encephalopathy syndrome (PRES) is a clinico-radiologically diagnosed reversible disorder of subcortical vasogenic brain edema with acute neurological symptoms like altered consciousness, seizures, headaches and visual disturbances. Pregnancy causes increased levels of vaso-angiogenic growth factors and cytokines in maternal circulation. Pre-eclampsia is characterised by increased BBB permeability and hence is at a higher risk of neurological complications of eclampsia.

With early diagnosis and prompt management of hypertension and seizures, PRES is a reversible condition and recovery is complete within few days with disappearance of MRI abnormalities.

Objective: To study the demographic, clinical and radiological profile along with feto-maternal outcome in eclampsia patients with Posterior Reversible Encephalopathy Syndrome (PRES).

Method: A retrospective observational study

Results: All six patients with confirmed eclampsia related PRES were unbooked patients with age less than 30 yrs with a history of sudden rise of blood pressure followed by seizures. Five (83.3%) patients were primigravida. Three (50%) of the patients had typical PRES with involvement of parietal and occipital region of brain only. Atypical PRES with involvement of basal ganglia, temporal and frontal lobes was noted in the other three patients, two of them having hemorrhagic PRES. Only two (33.3%) of the patients had residual symptoms with Modified Rankin scale (MRS) score ≥ 2 at the time of discharge. On neonatal outcome assessment, 2 patients (33.3%) had intrauterine fetal demise, one baby needed NICU admission, while 3 of the babies (50%) were alive and healthy at the time of birth.

Conclusion: Posterior Reversible Encephalopathy Syndrome (PRES) is potentially devastating syndrome if not diagnosed and treated promptly. As the name implies, a timely recognition and proper management may reverse the clinical and radiological findings. However, diagnosis is not always straightforward and requires a constellation of clinical, neurological, and radiographic findings.

Keywords: eclampsia, neuroimaging, posterior reversible encephalopathy syndrome (PRES), reversible

[HRP0532]

A Spectrum of Liver Diseases in Pregnancy and Their Management- A retrospective study in a tertiary care centre in northern india

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Introduction: Liver disorders comprise up to 3% of all pregnancy complications. The key to maternal and fetal wellbeing is an early diagnosis and appropriate management. Therefore, the present study was designed to see the incidence, spectrum, and outcome of liver disease in pregnancy.

Objective: To study the incidence, spectrum and perinatal outcomes of various liver diseases in pregnancy.

Methods: All antenatal women with liver disorders attending theantenatal clinic and labor room in the department of Obstetrics and Gynecology of AIIMS, Delhi in the last 9 months (Jan 2020 to Sept 2020) were included in the study. Enrolled cases were studied in respect to maternal and fetal outcome.

Results: Of the different types of liver diseases studies, the most common variant diagnosed was Intra hepatic cholestasis of pregnancy 75 percent followed by hepatitis B at 13 percent. The different diseases showing variable changes in the clinical and lab parameters were studied. The spectrum of diseases studied in our study include Intra hepatic cholestasis of pregnancy, HVOTO, EHPVO, Non cirrhotic portal fibrosis and hepatitis B. The different perinatal outcome in the study showed 3.5 percent cases with meconium stained liquor in the IHCP group and the rates of NICU admission and respiratory distress was more.

Conclusion: A multidisciplinary approach is the key to proper management and getting better maternal and perinatal outcomes in case of liver disorders in pregnancy. Early diagnosis and proper care can go a long way in saving maternal and neonatal lives.

[HRP0533]

Role of Renal Replacement Therapy in Obstetric Acute Kidney Injury Patients: In north indian population

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Introduction: Acute Kidney Injury is a serious complication in pregnancy, resulting in significant maternal and fetal morbidity /mortality.Obstetrical acute kidney injury is rare in developed countries but still a common occurrence in developing countries.

Objective: The aim of this study was to evaluate the magnitude of Pregnancy related acute kidney injury (PRAKI) in North Indian population, contributing factors and its relation with morbidity and mortality and outcome.

Methods: This prospective observational study was conducted in Department of Obstetrics and Gynaecology, in collaboration with Nephrology unit, Department of Medicine, Lucknow, Uttar Pradesh, India over a period of one year from June 2019 to June 2020. After informed consent and ethical clearance from institutional ethics committee(Ref.code:96thECM II B-Thesis/P68), total 150 PRAKI women were enrolled and 98 women were subjected for Renal replacement therapy according to KDIGO 2012. These women were followed for 3 months for maternal renal outcome.

Results: Present study reporteda high incidence (1.02%)of AKI during pregnancy and puerperium.The majority(57. 3%) of women were aged 26 to 30 years and had institutional delivery (n=140,93.3%). Most of the PRAKI was noted in multipara (n=74,49.3%) and in postpartum period (n=123,82%). Most frequent causes of PRAKI were Hypertensive disorder of pregnancy (n=72,48%), Puerperal sepsis(n=68,45%) and Haemorrhage (n=52,34%) in our study. Thirty-seven women were managed conservatively, while 98 required dialysis. Required number of dialysis was 9.06±7.75. Approximately half of the females required 1-5 cycles of dialysis (48.0%), >10 cycles were required by (31.6%) females. The overall mean survival time was 34.6 days who expired. Complete and Partial recovery of renal function occurred in 27.3%, and 31.3% respectively. However 3.3% progressed to chronic kidney disease, 34% were expired and 4% were undergone loss to follow up at the end of 3 months of follow up. High mortality (n=36, 30.1%)was noted in dialysisgroup (n=92, out of 98, 6 went leave against medical advice).

Conclusion: Hypertensive disorder of pregnancy was most common etiological factor. PRAKI requiring dialysis was associated with high mortality. Average number of dialysis were significantly lower (6.86+/-5.52, p=0.029) among females with hypertensive disorders(n=37) as compared to other risk factors (n=61).

[HRP0534]

Multidisciplinary Team Management in a Pregnancy with Takayasu Arteritis Complicated by Covid-19 Infection

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Introduction: Takayasu arteritis (TAK) is a rare, systemic, inflammatory large-vessel vasculitis, likely of autoimmune etiology, most commonly affecting women of childbearing age. The incidence of TAK in pregnancy is 2.6 cases/million/year. This disease in pregnant women increases the risk of obstetrical complications 13 fold higher including chronic hypertension, superimposed pre-eclampsia, eclampsia, umbilical artery changes, intrauterine deaths and still births as complications.

Covid-19 pandemic has startled medical healthcare facilities, and providing routine care to high risk antenatal patients has become a challenge for obstetricians throughout country.

Objective: To present the management in pregnancy, infected with SARS-Cov2 infection, known case of Takayasu Arteritis with chronic hypertension presenting with threatened preterm labour and superimposed preeclampsia.

Case Description: A 20-year-old female, G3A2, at 33+2 weeks' period of gestation, with chronic hypertension presented with threatened preterm labour. She was diagnosed with Takayasu Arteritis in first trimester during work up for chronic hypertension. She was on Labetalol 300 mg TDS, Ecospirin 150 OD and prednisolone 7.5 mg OD from first trimester. Due to lack of follow up during lockdown, patient did not have regular ANC visits and had not taken Prednisolone for the last 3 months before presentation. On admission, patient had raised blood pressure records of 160/110 mmHg in left limb and 160/108 in right limb and was diagnosed with Superimposed Preeclampsia. Investigations were reviewed: MRI showed right common carotid and right renal arterial stenosis. ECHO showed mild MR with ejection fraction of 50% and Urine Dipstix was 1+. On USG, EFW was 1755 grams with absent end diastolic flows in umbilical artery, with Manning 8/8 and reactive Non Stress test. While Covid-19 report was awaited, i v 20 mg labetalol was given, tocolysis started, Dexamethasone cover started with BP monitoring. BP controlled and decision to terminate the pregnancy was taken after the completion of steroid cover. Patient's covid-19 report came positive, and she was shifted to the designated Covid facility in AIIMS. After cover of Dexamethasone, repeat manning score done which was found to be 4/8 and emergency LSCS planned. As patient had taken prednisolone for more than 3 months, to prevent sudden adesonian crisis, patient was given injection hydrocortisone. Post cesarean to control patient's blood pressure, Enalapril 2.5 mg BD and Amlodipine 10 mg OD were added. After 14 days, on retesting, patient was negative for Covid-19 infection and was shifted to ward while the baby was in NICU care. Baby was tested twice, on day 5 and day 14 of life before finally shifting to non Covid facility.

Conclusion: A multidisciplinary approach is required in managing high risk antenatal patients and review must be sorted with specialists to attain the best possible outcome.

[HRP0535]

Non Stress Test in Covid-19 Pregnant Patients

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Introduction: The parameters on NST reflects fetal somatic and autonomic nervous system, as well as oxygenation of fetal myocardium. NST changes are also influenced by maternal status, hypoxia, pyrexia and inflammatory changes. Maternal fever increases her oxygen requirement and placental oxygen consumption thereby reducing uteroplacental oxygen transfer. This can result in fetal hypoxic neurological injury. Fetus responds to hypoxia by reducing the myocardial workload to Maintain positive aerobic metabolism in the heart.

COVID-19 infection leads to maternal pyrexia, cytokine storm, hypercoaguability which increases the risk of placental intervillous thrombosis and infarction as well as maternal hypoxia secondary to adult respiratory distress syndrome (ARDS). As compensatory mechanism for progressive hypoxia there is excessive secretion of erythropoietin to stimulate the bone marrow which may lead to thrombocytosis and resultant hypercoaguable state. Evidence of DIC has been documented. Although, currently there is no evidence to suggest that maternal COVID-19 infection has a direct effect on fetal morbidity and mortality, maternal changes secondary to COVID-19 may result in FHR changes.

Objective: To determine the Non Stress Test changes in women with COVID-19 infection.

Methodology: The method used in our study is observational analysis of 20 NST traces. NST parameters were studied based on fetal pathophysiological responses to inflammation and hypoxia which was due to COVID-19.

Results: All the fetuses showed baseline FHR in the normal range. 3 out of 20 showed minimal (<5) baseline variability, accelerations were present, not a single case of sinusoidal pattern was observed. Apgar score at 5 minutes were normal(>7).

Conclusion: NST of COVID-19 patients showed normal baseline FHR. NST is good method of fetal monitoring. In COVID-19 patients NST is predictor of good fetal wellbeing and outcome. However, no studies were found in English literature regarding COVID-19 and more research is required in this field.

[HRP0636]

An Observational Study of Caesarean Delivery on Maternal Request in Urban Settings

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Introduction: Caesarean delivery on maternal request (CDMR) is defined as a primary caesarean delivery on maternal request in the absence of any standard obstetrical or medical indication for avoiding a vaginal birth. CDMR rates appear to be increasing. The reasons why women are requesting this procedureknown to be associated with greater risks than vaginal birth, need to be evaluated.

Objectives: To find out the rates and reasons of CDMR

Materials and Method: This study is a self-administered, questionnaire based, observational study with convenient sampling technique. Target population was obstetricians (residents and faculty) practicing in private and government institutions anywhere in India. An in-house questionnaire was developed and validated. Participants belonged to two groups: group 1 included public sector and group 2 included private sector doctors.

Results: A total of 230 proformas were completed. There were 117 and 113 respondents in group 1 and 2, respectively. Mean age was 37.5±12.98 and 46.31±11.38 years for group 1 and 2, respectively. Respondents in both the groups said that elective caesarean delivery (CD)was most commonly done for obstetrical indications (76.92% in group 1 and 66.2% in group 2). However, CDMR is more common in group 2, almost 9% respondents said that their CDMR ratesare between 30-50% while in group 1, all had CDMR rates less than 30%. (p value .004). The most common reason for CDMR was fear and prolonged duration of labour pains (58.26%), followed by past infertility treatment (19.56%), fear of fetal complications (18.26%) and astrological reasons (6.95%).Patients with previous CD commonly requested CDMR in both the groups (61.8% group 1 and 50.1% in group 2).

Conclusion: Comprehensive programs and health promotion interventions with antenatal counselling and option of providing continuous fetal monitoring, training for trial of labour after caesarean section (TOLAC) and, use of labor analgesia can reduce CDMR rates.

Keywords: Caesarean delivery, maternal request, vaginal delivery

[HRP0637]

Estimation of Maternal Serum Vitamin D Levels and Its Correlation with Hypertensive Disorders of Pregnancy

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Introduction: Vitamin D is a fat-soluble vitamin having functions related to calcium metabolism and bone health. Several Indian studies have shown high prevalence of vitamin D deficiency in India despite abundant overhead sunlight. Various studies have also suggested a number of plausible ways through which vitamin D influences placental. fetal and maternal well-being. There are evidences in published literatureabout the role of vitamin D in modulating feto-placental function and researchers have concluded that maternal vitamin D deficiency is significantly associated with elevated risk for pre-eclampsia.

Objective: The study aims to determine the prevalence of hypovitaminosis D in the pregnant population and its correlation with hypertensive disorders of pregnancy.

Methods: This cross- sectional observational study was conducted at the department of obstetrics and gynecology, ABVIMS and Dr RML Hospital over a period of 1 year and 4

months. Four hundred term patients were enrolled randomly who fulfilled the inclusion and exclusion criteria. 3-4 ml of fasting blood samples were collected and analysed for total serum vitamin D levels. The 25(OH)D levels for each subject was recorded and correlation of vitamin D levels with hypertensive disorders of pregnancy was analysed. Statistical analysis was done and p value of <0-05 was considered statistically significant.

Results: The overall prevalence of vitamin D deficiency in the present study was 86.25%. The overall mean serum vitamin D level was 14.06 +/- 9.43 ng/ml. Out of 400 participants in the present study, 26 participants(6.5%) had hypertensive disorders of pregnancy. Twenty three out of 26 patients(88.46%) had vitamin D levels below 20 ng/ml. and the rest 3 (11.54%) had levels between 20-29 ng/ml. Strikingly, none of the patients of hypertension had sufficient levels of vitamin D. However, the association between vitamin D levels and hypertensive disorders of pregnancy was not found to be statistically significant(p value= 0.282) in the study conducted.

Conclusion: There is a very high prevalence of hypovitaminosis D in the pregnant patients attending the institute. Although none of the patients of hypertension had sufficient vitamin D levels, the association between hypovitaminosis D and hypertensive disorders of pregnancy was not found to be statistically significant in the present study.

[HRP0638]

Glanzmann Thrombasthenia in Pregnancy: Every obstetrician's nightmare

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Introduction: Glanzmann Thrombasthenia (GT) is a rare autosomal recessive genetic disorder with an incidence of 1 in 1,000,000. It results from defect in platelet glycoprotein (GP) IIb/IIIa leading to defective platelet aggregation and bleeding tendencies despite normal platelet count. GT in pregnancy poses a special risk to mother and foetus in form of inevitable antepartum and postpartum haemorrhage.

Case Report: A 33 year old primigravidawas referred at 23 weeks of pregnancy with hypertension and platelet disorder. She was diagnosed to have chronic hypertension at 12 weeks of gestationand was taking labetalol. Due to heavy menstrual bleeding since menarcheand epistaxis, she was diagnosed to have GT. This was a spontaneous conception after primary infertility of 10 years. Her haemoglobin was 10.9gm and platelet count was 1.8lac. After 25 weeks of pregnancy, she failed to seek routine antenatal care owing to the national lockdown due to COVID 19 pandemic. She presented at 36 weeks of gestation with epistaxis, her blood pressure was 150/100 mmHg and platelet count was 1.5lac. She was managedwith oral tranexamic acid, nasal packing, labetalol was increased to 200mg BD and was planned for induction of labour after one week. Platelet function test and flow cytometry confirmed Type III GT. Thromboelastography showed poor clot initiation and strength. She came at 39 weeks with superimposed preeclampsia (BP=170/100mmHg, Urine albumin 2+).

Anticipating delivery, she was startedon Tranexamic acid 1gm IV TDS and recombinant factor VII(rFVII) 60mcg/kg 3 hourly. Prophylactic MgSO4 infusion was started. She underwent lower segment caesarean section in view of poor Bishops score with impending ecclampsia. She delivered a male baby(3290gms) and uterus was well retracted and LNG IUS inserted. Intraoperatively, she received single and random donor platelets.

After 4 hours, emergency laparotomy was taken for hemoperitoneum. Right uterine artery ligationwas done and vertical compression Hayman sutures were applied. She received tranexamic acid, rVIIand massive blood transfusion. Postop, she was kept on rVII 4mg 6 hourly and tranexamic acid 1 gm 8 hourly for 48 hrs. She was discharged on day 9 on tranexamic acid. The baby had a normal platelet count.

After one month, she presented with secondary PPH with subinvoluted 18 weeks uterusfilled. LNG IUS got expelled with clots. Misoprostol 1000mcg was inserted per rectal and rFVII infusion (90mcg/kg 3 hourly) for over 3 daysand uterus became 14 weeks after 2 days. She recievednorethisterone acetate till bleeding stopped and discharged onormiloxifene 60mg twice a week.

Conclusion: Tertiary care multidisciplinary team and acomprehensive laboratory is key to a successful diagnosis and outcome in pregnancy with GT. Recombinant factor VII plays a pivot role in the management of obstetric haemorrhage in patients who are refractory to platelet transfusions.

[HRP0639]

Follow Up and Outcomes of Very Short Cervix <15 Mm- Single centre experience

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Introduction: Preterm delivery is the leading cause of neonatal morbidity and prolonged hospitalization. Current recommendations suggest the use of vaginal progesterone and cervical cerclage in patients with short cervix < 25 mm. However a very short cervix <15 mm is always a dilemma for the obstetricians, as it is thought it may be too late for progestogens ,whilst a cerclage may increase the risk of preterm premature rupture of membranes.

Objective: Till date, there is limited data availableon the management of women with very short cervix. In this study, we have tried to compare two common management approachespreferred by obstetricians in managing these women with very short cervix < 15mm.

Methods: This is an observational study conducted to look at the treatment modalities, follow up and outcomes ofpatients of very short cervix <15 mm diagnosed on TVS before 28 weeks. 73 singleton pregnancies were identified with a cervical length < 15 mm and were included in the study. Depending on patient and obstetrician's choice, they were started on Progesterone treatment or underwent cerclage. Those who opted for

Progesterone treatment were advised restricted physical activity and to follow up fortnightly with serial transvaginal cervical length scans. If further shortening of the cervix was noted, cervical cerclage was given as an option.

Based on the gestation age at diagnosis, they were divided in 3 groups- < 16 weeks, 16-24 weeks and 24-28 weeks. Primary outcome was preterm birth < 34 weeks and secondary outcomes were birth weight at delivery, PROM rates, emergency caesarean section and NICU admission.

Results: Out of 73 patients diagnosed with short cervix- 5 were diagnosed before 16 weeks, 27 between 16-24 weeks and 41 between 24-28 weeks. 40 patients underwent cerclage and 33patients opted for Progesterone treatment(Inj Proluton and vaginal susten). Mean gestational age at delivery was comparable between cerclage and Progesterone group in all 3 gestational age groups- 34.75 vs 33 weeks (<16 weeks), 35.13 vs 34.71 weeks (16-24 weeks) and 35 vs 34.91 weeks (24-28 weeks). PROM rates, emergency caesarean section, NICU admission were also found to be similar in the 2 groups. 8/33 (24.2%) patients who were started on Progesterone treatmenteventually needed cerclage due to progressive cervical shortening on serial scans. Majority of these cases were identified with 2 weeks of the first scan and initiation of Progesterones.

Conclusions: In patients with short cervix <15 mm, both Progesterone treatment and cerclage are found to prolong pregnancy and prevent preterm birth. Patients on Progesterone treatment need more vigilant follow up with serial scans. Those found to be non-responsive to Progesterone treatment will need cervical cerclage.In patients who opt for expectant management, we can follow this stepwise approach.

[HRP0640]

Evaluation of SOS Score (Sepsis in Obstetrics Score) in Patients of Obstetric Sepsis and Its Role in Prediction of Morbidity and Mortality

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Introduction: Variety of illness scoring systems used till now in emergency settings did not prove that useful in patients of pregnancy associated sepsis(PAS) as they did not take an account of certain changes in physiology while pregnancy therefore a new illness severity score i.e SOS was introduced by Albright et al in 2014 for Triaging the patients of PAS for the need of critical care support.

Objective: We aimed to validate the SOS score in terms of its ability to triage those PAS patients who may require critical care support as well as its role in evaluation of morbidity(in terms of organ failure) and mortality(in terms of final outcome).

Material and Methods: This was a Prospective observational study conducted in Department of Obstetrics and Gynaecology in collaboration with Trauma ventilator unit, King Georges Medical University, Lucknow over a period of One year, After getting approval from institutional ethics committee. A total of 161 patients were screened, 6 rejected to participate in the study and 5 were not fit according to inclusion criteria, and finally 150 patients fulfilling the inclusion criteria were enrolled in the study. All patients of puerperal sepsis, septic abortion and chorioamnionitis were enrolled in this study as per SIRS criteria (systemic inflammatory response syndrome criteria). Severity of sepsis was determined on the basis of presence of organ failure. A score cutoff of 6 was taken for statistical analysis.

Results: Total 150 PAS patients severe sepsis was present in 44% patients, organ failure was found in 86 (57.33%) patients, 112 (74.67%) patients needed critical care support, out of 150 PAS patients expired. When SOS score performance was assessed in terms of severity of PAS it had a sensitivity of 76.7%, specifity of 64.1%, accuracy of 71.4% and AOC OF 0.8. When score performance was judged in terms of prediction of need of critical care support,its sensitivity was 65.2%, specifity was 57.9%, accuracy was 58% and AOC was 0.687. In terms of evaluation of final outcome by SOS the sensitivity was 90.6%, specifity was 49.2%, accuracy was 70.9% and AOC was 0.794.

Conclution: SOS score correlates fairly well with severity(in terms of organ failure) and outcome in PAS patients but its role in prediction of need of critical care support is not that good.

[HRP0641]

Maternal and Neonatal Outcomes in Covid-19 Infected Pregnancies

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Objective: To study the maternal and neonatal outcomes in COVID-19 infected pregnant women

Study Design: We retrospectively collected andanalysed data for a cohort of 35 pregnant patients who tested positive for COVID-19 between May 2020 and September 2020 to assess the impact of COVID-19 on pregnancy, and neonatal outcomes.

Results: 35 pregnant patients tested positive for COVID-19. Mean age was 31 years (24-38 years). Mean gestational age was 36 weeks 1 day (7 weeks 5 days-39 weeks 1 day). Most common presenting symptom was cough in 16/35 patients (45.7%) followed by fever in 12/35 patients (34.2%). 29 patients delivered, 1 had spontaneous abortion and 5were ongoing pregnancies. 10/35 (28.5%) patients were asymptomatic. Severity of the symptoms ranged from mild in 19 (57.2 %), moderate in 2 (5.7 %), severe in 2 (5.7%) and critical in 1 (2.9%) patient. 26/29 (89.6 %) patients delivered by C-section, 4/29(13.7 %) had preterm birth, 2/29 patients (6.8 %) developed complications requiring ICU support after delivery. No maternal death occurred. Out of 31 neonates, 27 were singletons with 2 sets of twins. 30 neonates were liveborn and 1 was still born (intra-uterine demise).COVID-19 infection was not found in the newborns and none developed severe neonatal complications.

Conclusion: Although the majority of mothers were discharged without any major complications, severe maternal morbidity as a result of COVID-19 was reported. Hence, careful monitoring of pregnancies with COVID-19 is warranted. Vertical transmission of the COVID-19 was not seen.

[HRP0642]

Congenitally Corrected Heart Disease in Pregnancy

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Introduction: Congenitally corrected cardiac disease is rare, accounting for 1 in 33000 live births. In such a heart, there is atrioventricular-ventriculoarterial discordance. Pregnancy in the presence of such malformation causes risk of complications to the mother as well as the child. We describe successful outcome in a pregnant woman with congenitally corrected transposition of great arteries (ccTGA).

Case: 26-year-old, primigravida, known case of ccTGA since 15 years of age with situs inversus, levocardia, severe pulmonary stenosis and large ventricular septal defectcame to our facility with a pulse of 114/minand respiratory rate of 22/minwith low oxygen saturation (86-94%), NYHA class III, WHO class III (right ventricular function was normal on echocardiography). TheECHO report showed right atrium to the left and left atrium to the right with atrioventricular-ventriculoarterial discordance, a large ventricular septal defect, severe pulmonary stenosis and normal biventricular function. Daily fetal movements were adequate.

Management: The acute episode of dyspnea and low saturation was taken care of with oxygen and bed rest. Cardiology opinion was taken and no cardiac drugs were started antenatally. With bed rest, the patient improved to NYHA II. There was no worsening of heart function in third trimester. The patient went into labour spontaneously at 38 weeks and 5 days and delivered a live baby weighing 2265g with an APGAR of 9,9,9. Intravenous Lasix 20mg and Intramuscular Morphine 3mg were administered following delivery and there were no complications in the immediate postpartum period. Intravenous antibiotics were given till postnatal day 5. Cardiologist started Tablet Torsemide 10mg with Spironolactone 50mg half tablet twice daily and Tablet Ramipril 2.5mg once daily. The patient was discharged on day 6 postpartumon these the cardiac drugs. The patient was advised for contraception but did not opt for it.

Outcome: Patient had an uneventful postpartum course. She was discharged with her newborn on day 6 postpartum on the cardiac drugs as advised by the cardiologist.

Discussion: In this rare condition of ccTGA, pulmonary venous return flows from the left atrium into the right ventricle through the tricuspid valve which is pumped into the systemic circulation. The systemic blood enters the right atrium and flows into the left ventricle, guarded by the mitral valve, and is pumped into the pulmonary circulation. It may be seen associated with other cardiac defects. The survival rates are good for ccTGA. Pregnancy, being a hyperdynamic state affects the cardiac functioning and therefore it becomes important to monitor throughout pregnancy. The prognosis in such patients depends on right ventricular dysfunction and tricuspid regurgitation. They are at also high risk of cardiac failure in immediate puerperium.

Conclusion: Women with rare congenital heart disease can present for antenatal care. Worsening of cardiac function is expected during the third trimester requiring close supervision and monitoring. With proper care, a good outcome for the mother and the newborn can be achieved.

[HRP0743]

Differential Expression of SFLT-1 and PLGF Levels in During Pregnancy: A prospective cohort study

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Introduction: Preclampsia (PE) is associated with progressive systemic endothelial dysfunction. A longitudinal assessment of endothelial integrity might represent a way to evaluate the satisfactory evolution of pregnancy and could result in early detection of the development of PE.

Objective: To study the sequential changes in sFlt1 and PlGF during the course of pregnancy and to investigate whether the alterations in these markers early in pregnancy differ in women who develop pre-eclampsia.

Methods: A prospective study carried in department of Obstetrics & gynaecology and 112 pregnant women were followed through pregnancy. sFlt1 and Placental growth factor were measured at 12-14, 18-20 and 24-26 weeks of gestation and correlated with development of preeclampsia later in pregnancy.

Results: Of 112 women,14.41% (n=16) developedgestational hypertension(GH) and 7.2% (n= 8) had PE. The mean age of normotensive women, GH and PE was 26.3±3.6, 25±3.33 & 27.12±4.7 yearsrespectively.At 11-14weeks the PlGF levels(pg/ml)were lowestin women developing GH (PE-457.4; GH:265&Normotensive-1062.9), and sFlt1levels (pg/ml) were highest (PE-7937.5; GH-6732.8; Normotensive-3952.4) in women developing PE. At 24-26 weeks there is steep fall in PLGF (PE-79; GH-261.4; normotensive-480.2) and rise in sFlt1 (PE-29803.6; GH-12617.04; Normotensive-10459.1). sFlt-1 and PlGF, when measured at 24-26 weeks of gestation, predicted later development of preeclampsia, with the potential for high specificity (87.5% & 75%) and high sensitivity (87.5%& 72%). sFlt-1 came out to be the single most predictor of preeclampsia at 12-14 weeks and odds of developing preeclampsia is 30 (CI 2.5-348.77)with cut off ≥ 5828 pg/ml.

Conclusion: Thevariation in sFlt-1 and PlGF preceded the commencement of clinical features of PE. Suppression of sFlt-1or augmentation of PlGF forms novel therapeutic targets to prevent or ameliorate PE. GHTN develops differently from PE, with a hyperdynamic circulation and angiogenic profile almost similar to normotensive pregnancy, suggesting a different therapeutic approach.

[HRP0744]

Spectrum of Congenital Anomalies and Preventable Associated Factors in Northwest India: A tertiary centre study

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Introduction: Congenital anomalies are structural or functional anomalies that occur during intrauterine life and can be identified prenatally, at birth, or sometimes may only be detected later in infancy. In 50% of cases, specific cause isn't known. In low and middle income countries, communicable diseases and malnutrition contribute major part of infant mortality. But as the socioeconomic status improves, there is an epidemiological transition in the rate as well as cause of infant mortality. High birth rates, inaccessibility of prenatal diagnosis, and lower rates of pregnancy termination following prenatal diagnosis of congenital anomalies (CAs) all contribute to an increased frequency of birth defects in LMICs.

Objective: To ascertain the prevalence of congenital anomalies, their associated factors and follow the course of treatment of affected neonates in a tertiary care centre in Northwest India.

Methodology: It is a cross sectional study performed in the Department of Obstetrics & Gynecology at **All India Institute Of Medical Sciences, Jodhpur** over a period of 1 year from February 2019 to March 2020. The results obtained were compared with the regional and National data. All pregnant females who presented to the facility for delivery or for medical termination of pregnancy for diagnosed or suspected congenital anomaly in fetus were included. They were provided with a questionnaire which was filled at the time of first contact with the subject. Females in whom anomaly was diagnosed after delivery of the neonate were also included and the questionnaire in such patients was filled up retrospectively by them. This questionnaire was prepared in Hindi as well as English language. The validity and reliability of the questionnaire was checked.

Observation and Results: Out of the 2360 deliveries included, 86 had congenital anomalies. Only 2 patients were aware of need of preconceptional folic acid intake and had taken it. Of which, 1 had 1st trimester MTP for acrania and the other for skeletal dysplasia. In those who did not receive pre conceptional folic acid, CNS anomalies were 26.2%, being the commonest followed by, GI and syndromic cases which was around 20.2% each.

Most of the pregnant females (75.5%) received folic acid supplements antepartum. Of which, the most common anomaly was CNS forming 26.1%, and GI forming 24.6%. 21 (24.4%) did not take folic acid ever, still CNS was most common (28.5%) anomaly.

Out of 86 cases, 8 females had glucose intolerance, of them, 5 were on MNT and 3 required insulin. Out of those on insulin, 1 had CNS anomaly, 1 CVS and 1 GI. Most of the cases on MNT were syndromic babies.

Discussion and Conclusion: The congenital anomalies in our data included those diagnosed at USG or detected at birth. Most patients either didn't report in early trimester or didn't undergo early screening tests. The most common anomaly was NTD as compared to cardiovascular in many other studies from India and abroad. Thus the most common anomalies in Northwest India are preventable with folic acid supplementation and early screening test.

[HRP0745]

Perceptions and Experience of Childbirth Among COVID Positive Mothers in Low Resource Settings

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Introduction: Pregnancy, with all its pain and discomfort, is an occasion of happiness and celebration - not only for the mother but for the whole family. There is ongoing interest to understand the effects of Covid 19 infection on pregnant women and their newborn, to reduce maternal morbidity and mortality . However, there is a felt need to study its impact on the psychological and emotional wellbeing of pregnant and laboring women. The present study aims to focus on this aspect of Covid 19 infection among pregnant women

Aim: To describe the perceptions, apprehensions and fears of Covid positive women delivering during Covid pandemic in a Covid dedicated health facility and to document both positive and negative experiences of childbirth among these women.

Materials and Methods: This is a Cross-sectional, observational study. The study was conducted in the Department of Obstetrics and Gynecology of a tertiary care hospital of Delhi from 17th July 2020 to 31st August 2020. All confirmed Covid positive pregnant women who delivered during the study period were included for the study in postpartum period. A pre validated questionnaire was used. All the participants were contacted post delivery prior to discharge from hospital and were enquired about their birthing experience as per the questionnaire.

Results: A total of 34 Covid positive women delivered during the time frame of our study. Out of these, two were excluded due to bad obstetric outcome (1 had still birth, 1 had early neonatal death). Of the 32 participants, 12 (37.5%) patients had vaginal delivery while 20 (62.5%) patients underwent caesarean delivery. Of these, 25 patients (78.12%) experienced severe anxiety because of fear of disease and its progression prior to admission. 24 (75%) feared discrimination due to stigma attached to Covid infection while 20 (62.5%) were afraid of loneliness with no birth attendants along. 20(62.5%) patients were apprehensive if doctors would come physically to examine them. However, most of these women were satisfied with their overall birthing experience with 11 (34.37%) rating it 5/5 and another 15(46.87%) rating it 4/5 post delivery. 20 women were upset due to baby being shifted to nursery and not being able to hold them physically, however they acknowledged that it was for the well being of their babies. Another 15(46.87%) women were disturbed due to delay in discharge from the facility. Only 2(6.25%) patients had apprehensions due to Health care workers. As per them the health care workers were in hurry while interacting with them. None of the patients had any problems due to the doctors coming in PPE and inability to recognize the face of health care workers.

Conclusion: Majority of women with Covid infection had anxiety and fears regarding their birthing experience and concerns for their babies. However, it is the selfless efforts of the medical fraternity during these challenging times providing quality antenatal and intrapartum care and a positive childbirth experience.

[HRP0746]

Evaluation of Oxidative Stress Markers and Endothelial Function Assessment During Pregnancy and Correlate with Development of Hypertension in Pregnancy: A prospective cohort wtudy

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Introduction: Preclampsia (PE) is associated with progressive systemic endothelial dysfunction. A longitudinal assessment of endothelial integrity might represent a way to evaluate the satisfactory evolution of pregnancy and could result in early detection of the development of PE.

Aims & Objective: To study the sequential changes in Isoprostanef2α (Oxidative stress marker), Flow mediated dilatation (marker of endothelial function) and Pulse wave velocity (marker of arterial stiffness) during the course of pregnancy and to investigate whether the alterations in these markers early in pregnancy differ in women who develop gestational hypertension and pre-eclampsia.

Material & Methods: A prospective study carried in department of Obstetrics & Gynaecology, AIIMS, ND and 112 pregnant women were followed through pregnancy. Serum Isoprostane 2 alpha, FMD and PWV were measured at 12-14, 18-20 and 24-26 weeks of gestation and correlated with development of preeclampsia later in pregnancy.

Results: Of 112 women,14.41% (n=16) developedgestational hypertension(GH) and 7.2% (n= 8) had PE. The mean age of normotensive women, GH and PE was 26.3±3.6, 25±3.33 & 27.12±4.7 yearsrespectively. Flow mediated dilatation(%) of brachial artery at 12-14 weeks of gestation was lowest in women destined to develop GH (NT=11.7.GH=7.2, PE=9.46, P=0.19) while PWV was lowest in women destined to develop PE (NT=74.05±49.18, GH=78.39±51.79, PE=42.96±24.68). SerumIsoprostane f2α levels were significantly higher at 12-14 weeks of gestation in women destined to develop GH (NT=5.2, GH=3263.9, PE=15.04,P=0.00). Further, there was significant difference (p=0.02) in isoprostane F2α level between pregnancy complicated with PE and IUGR (2196.0; 17.55-6554.33) as compared to PE without IUGR (14.02; 6.69-15.55). Women developing GHlater had significantly higher levels through pregnancy and even at 12-14 weeks of gestation. There was significant positive difference in isoprostane f2α at 12-14 weeks of gestation with PVW (correlation =0.2; p=0.04). At 18-20 weeks of gestation there is positive correlation between PWV with Iso-f2α(correlation=0.2; p=0.02) and uterine artery Resistive index(correlation = 0.3; p=0.001).

Conclusion: PE develops differently from GH, with a hyperdynamic circulation and angiogenic profile almost similar to normotensive pregnancy, suggesting a different therapeutic approach.GH on the other hand, develops similar to essential hypertension in non pregnant state with oxidative stress as an important factor in pathogenesis of gestational hypertension.

[HRP0747]

Distinct Pro-Inflammatory Markers in Gestational Hypertension and Preeclampsia: A prospective study

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Introduction: Hypertensive disorders of pregnancy (HDP) have an underlying mechanism of endothelial dysfunction and elevated immune response. Change in the level of inflammatory cells is the hallmark of altered immune response howeverthere is conflicting evidence regarding predictive role of Neutrophil Lymphocyte ratio (NLR) and Platelet Lymphocyte ratio(PLR) ratio for HDP.

Objective: To evaluate the systemic inflammatory markers such as differential leucocyte count , neutrophil-lymphocyte ratio (NLR), monocyte-lymphocyte ratio (MLR) and platelet-lymphocyte ratio (PLR) in early pregnancy and correlate with the development of hypertensive disorders of pregnancy.

Methods: In a prospective observational study,136pregnant women aged 18-40 years were recruited before 12 weeks of gestation. Complete blood count including hemoglobin, differential leucocyte counts were measured at 12-14 weeks and 18-20 weeks of gestation. NLR, MLR and PLR were calculated after obtaining the absolute values. All pregnant women were followed with regular antenatal care and outcome measures like development of Gestational hypertension, preeclampsiaand IUGR were noted. Distribution of data was analyzed using the unpaired student t-test and one-way ANOVA was used to compare the quantitative data between the two groups. P-value < 0.05 was considered statistically significant.

Result: Out of136 pregnant women, 8.82% (n=12) developed GH,18.38% (n=25)PE and 99 pregnant women were normotensive healthy controls (NT). The mean age in years (NT=27.9±4.13, GH=29.16±4.46 and PE=27.68±4.42, P= 0.590) was similar while BMI (NT=23.8±3.81, GH=27.2±6.01, PE=27.7±6.06; p=0.09) was significantly more in women with HDP. At 12-14 weeks of gestation, total leucocyte count (GH=11.67 ± 2.99, NT=9.11 ± 2.13, PE=9.04± 2.18, P=.001) and total neutrophil count (GH=74.67± 6.56,NT=70.07± 6.15, PE= 71.28 ±5.37, P=0.04) was significantly more inwomen developing GH later. There was significant difference in the NLR (p=0.017) and PLR (P=0.015) between healthy controls and G.HTN group (GHTN- 4.82±1.76, NT- 3.64±1.36) but not PE group (3.67±1.16). TLC at 12-14 weeks with a cut-off value of ≥10.5 predictedthe development of GHwith AUC of 0.735 (p=0.008) and sensitivity and specificity of 67% and 74% respectively. However, AUC (0.713 each)for NLR at cut of value of≥3.76 and PLR at cutoff of ≥11.8 is statistically significant at12-14 weeks of

gestationfor prediction of GHTN with67% sensitivity and 66% specificity for both.

Conclusions: This study suggested that GH has an altered immune response early in the course of pregnancy (at 12-14 weeks). This emphasizes the fact that GHTN may involve the same etiology of exaggerated inflammatory response as involved in essential hypertension. PE has a non inflammatory basis and develops in otherwise healthy women.

[HRP0749]

Maternal Thyroid Function at 11-18 Weeks of Gestation as A Predictor of Preeclampsia in Primigravida

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Introduction: Maternal hypothyroidism is the most common disorder of thyroid function in pregnancy and is associated with adversematernal and fetal outcomes. Pregnancy is usually associated with mild hypothyroidism, with preeclamptic patients having higher incidence of hypothyroidism. Changes in thyroid function in normal pregnancy are well-documented but in complicated pregnancy like preeclampsia, very little is known.

Objectives: This study was done to assess and correlatematernal thyroid function (FT4, TSH and Anti TPO level)with development of preeclampsia. To determine the early predictors among thyroid functions for development of preeclampsia.

Methods: A prospective observational cohort study wasconducted over a period of 18 months on 200 primi gravida patients aged 18-35 years with singleton pregnancy. Patients with previous thyroid dysfunction –Hypothyroidism, hyperthyroidism orthyroid surgery were excluded from the study. Venous blood sample (5ml) of all the patients was taken at the time of enrolment for measuring FT4, TSH and Anti TPO. The patients were monitored for development of pre-eclampsia and severe eclampsia during their pregnancy. Maternal outcomes were noted in terms of Mode of delivery, outcome of labour, admission to ICU/CCU, maternal mortality and perinatal outcomes in terms of: Low Birth Weight babies (LBW), IUGR, Stillbirth, LowAPGAR score,Admission to NICU and Neonatal mortality. Collected data was entered in MS EXCEL spreadsheet using SPSS version 21.0. Pvalue of <0.05 was considered statistically significant.

Results: TSH, FT4 and Anti TPO was deranged in 36.00%, 25.00%, and 14.50%, respectively. Among 200 patients, 38(19%) developed pre-eclampsia of which 27(71%) had mild and 11(29%) had severe pre-eclampsia. Patients with pre-eclampsia had significantly higher TSH (7.15 vs 2.54, P value); significantly lower FT4 (0.93 vs1.12, P<.0001) and significantly higher Anti-TPO (42.38 vs19.78, P=0.001).Among all the parameters, TSH(mIU/L) was the best predictor of pre eclampsia at cut off point of >5.68 with 63.16% Sensitivity and 75.00% chances of correctly predicting pre eclampsia. The maternal outcomes in present study were preterm birth in 9.00%. Labor was induced in 83.87% and spontaneous in 16.13% cases. Mode of delivery was normal vaginal delivery in 83.00%, cesarean section (13.50%) and instrumental delivery in only 7 out of 200 patients. Thyroid dysfunction showed no significant association with maternal outcomes among pre-eclamptic women(p>0.05). Mean birthweight was 2.76 ± 0.37 kg; with 14.00% having low birthweight. Mean APGAR score was 8.96 ± 0.69.NICU admission was required in 11.50% newborns. Neonatal mortality rate was 1.00%. Thyroid dysfunction showed no significant association with fetal outcomes among pre-eclamptic women.(p>0.05)

Conclusion: In conclusion, thyroid dysfunction has a significant association with pre-eclampsia and it can predict pre-eclampsia in early pregnancy with TSH levels being the best predictor. Though thyroid dysfunction showed no significant association with maternal and fetal outcomes among pre-eclamptic women, monitoring thyroid hormones in women during routine pregnancy might help with early diagnosis and management of preeclampsia and consequently reduce the adverse maternal and neonatal outcomes.

[HRP0850]

Prevalence and Pattern of Major Congenital Anomalies at A Tertiary Referral Centre

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Introduction: Congenital anomalies(CAs) are conditions of prenatal origin evident at birth which has an impact on an infant's health, development and/or survival. These contribute to the fifth largest cause of neonatal deaths in the country. Although approximately 50% of all congenital anomalies cannot be linked to a specific cause, there are some known genetic, environmental and other causes or risk factors.

Objective: To identify the incidence rate, demographic profile, risk factors and perinatal outcomes of women with CAs.

Method: It is aretrospective,cross sectional study, done by reviewing the case records of all antenatal women admitted in labor ward of Pt. B.D Sharma postgraduate institute of medical sciences, Rohtak, India with the prenatal diagnosis of major congenital anomalies on ultrasound from August 2018 to January 2020.The socio-demographic details, obstetric history, pattern of congenital anomaly, delivery, birth details and other relevant history were noted.

Results: Out of the total 21,187 births during the study period of 18 months, 130 had major congenital anomalies, making its incidence rate of 6.1 per 1000 births. Out of these, majority were neural tube defects (66.16%) followed by renal anomalies (11.5%) and gastro-intestinal tract anomalies (6.9%). Majority (61.5%) of the mothers were multigravida with the mean age of 24.58±4.11 years. About 74.6% of women had a rural background while 37.6% were uneducated.55.4% of women with major congenital anomalies underwent termination of pregnancy before 20 weeks of gestation whereas 23.07% delivered at term. Among the women with NTDs, preconceptionalfolic acid intake was present in only two (2.3%) and first trimester folic acid intake in 34 (39.5%) women.Associated chronic illness was found among nine women(6.9%) including diabetes mellitus in three, hypothyroidism in four and asthma in two.Among the neonates, 29 (22.3%) were live born and 101 (77.7%) were still born. The mean birth weight was 1140.83±103.75grams and majority were males (57.6%).

Conclusions: High incidence of NTDs highlights the need for preventive measures like folic acid supplementation among the vulnerable groups. Awareness and proper antenatal care may lead to timely detection and termination of pregnancies with major Congenital anomalies to avoid psychological and financial burden on such families.

[HRP0851]

Assessment of Quality of Life After Pelvic Floor Repair for Uterovaginal Prolapse

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Introduction: Pelvic organ prolapse is a common condition seen in women of aging population. It is not a life threatening condition but adds to the morbidity by affecting the quality of life. The prevalence of symptomatic prolapse ranges from 3-28% and surgery for prolapse accounts for 20% of the total major elective surgery.

Material & Method: This observational study was done to assess the improvement in quality of life and anatomical correction post operatively at 6 weeks in women under going pelvic floor repair. A convenience sampling allowed recruitment of 45 women with uterovaginal prolapse, 36 women turned up at 6 weeks for follow up. Quality of life assessment was done using standard Prolapse Quality Of Life Questionnaire(PQoL) and anatomical assessment was done using Pelvic Organ Prolapse Quantification(POPQ) scoring.

Results: The results of this study revealed that postoperatively the Quality Of Life improved in all domains in postoperative period although the improvement ranged from minimum of 11.1% to maximum was 87.5% with mean 57.0%

Minimum improvement in the score of symptoms was 58.3% and maximum was 92.9%. There was a significant improvement in the mean of 9 specific points of POPQ postoperatively except for Tvl which was reduced by 1.2 cm.

Mean of Aa point reduced from 1.56±1.34 to -2.47±0.41. Mean of Ba point reduced from 3.31±1.52 to -2.21±0.48. Mean of Ap was reduced from 0.44±1.51 to -2.39±0.32, mean of Bp was point reduced from 1.9±1.79 to -2.15±0.35, mean of Gh was reduced from 4.45±0.84 to 3.68±0.4 and mean of Tvl reduced from 9.64±0.64 to 8.43±2.95 (reduction by 1.2 which was statistically significant). Mean of Pb was increased from 2.63±0.5 was to 2.82±0.4.

The anatomical improvement in prolapse from stage 2-4 in preoperative period to stage 1 in all women in post op period was observed.

Conclusion: It is recommended that anatomical outcome of surgery for POP should be assessed with objective clinical tool like POPQ and functional outcome with validated Questionnaire like PQoL.

[HRP0852]

Efficacy and Safety of Misoprostol for Termination of Pregnancy Up to 20 Weeks Gestation in Women with Previous One Caesarean Section

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Background: The objectives of this study to evaluate the efficacy and safety of Misoprostol for inducing abortion up to 20 weeks gestation in women with previous one caesarean section and to assess side effect and acceptability of this regimen.

Methods: This was a prospective observational study where 60 pregnant women with previous one caesarean section up to 20 weeks of gestation underwent medical termination of pregnancy, who were planned for MTP in accordance with the MTP Act, India. These sixty women were divided according viability of fetus in to Group 1, viable fetus (n=22) and Group 2, nonviable fetus (n=38), and according period of gestation women with less than 12 weeks of POG (n=37, Group A) and women between 13-20 weeks of POG (n=23, Group B). The women with less than 12 weeks of gestation were given 400mcg Misoprostol per vaginally while 200mcg was given in the women with 13- 20 weeks gestation 3 hourly maximum 5 dose in both groups (half the dose recommended by FIGO 2017).

Results: 71.7% of women needed either 3 or 4 doses of Misoprostol and the mean number of Misoprostol dose required was, 3.68±0.96. 76.7% of women expelled fetus between 9-16 hours and mean induction abortion interval was found to be 13.28±2.76 hours. 100 % of cases expelled placenta within half an hour of fetal expulsion. 13.3% of cases had retained products of conception and all these women needed surgical intervention in the form of evacuation. There were no cases of uterine rupture seen in both groups. Total Misoprostol dose required in Group 1 and 2 was 1018.18±326.07mcg, 1284.21±330 mcg respectively ($p<0.01$). We found 100 % success rate in both groups in our study. The mean POG in Group A and B was 9.32±2.88 weeks, 15.94±2.5 weeks respectively ($p=<0.001$). Mean no. of Misoprostol doses required was 3.22±0.88 in Group A and 4.43±0.51 in Group B ($p=<0.001$). The mean total dose of Misoprostol required in Group 1 and 2 was 1232.43±314.51 mcg,1069.57±349.59 mcg respectively ($p=<0.001$). There was no case of uterine rupture in either group.

Conclusions: This dose regimen was highly effective for the termination of pregnancies up to 20 weeks POG, with previous one LSCS as all women expelled fetus and placenta within 24 hours of first dose of Misoprostol, giving a 100% success rate, regardless of whether it was a viable or nonviable fetus or whether it was a first or second trimester termination showing that this regime can be used as first line option in second trimester abortion with no contraindication in women with previous caesarean delivery. The number of Misoprostol doses required for second trimester termination was significantly

higher than that needed in first trimester termination. Also, the mean abortion induction interval was higher in second trimester (15.09±2.23 hours) as compared to that in the first trimester (12.16±2.47 hours). This dose regimen was found to be safe in cases of previous one caesarean section as it was seen that there were no cases of scar dehiscence or uterine rupture.

Keyword: MTP (Medical termination of pregnancy), FIGO (International guideline of gynecology and obstetrics), POG (Period of gestation), LSCS (Lower segment caesarean scar), PV (pervaginum).

[HRP0853]

Covid-19 Infection with Other Viral and Bacterial infections in Pregnancy: A case series

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Introduction: The Novel coronavirus, known to cause potentially life- threatening severe respiratory illness has created havoc in public worldwide by affecting all age groups including pregnant women. The physiological and immunological changes that take place during pregnancy make pregnant women more vulnerable to acquire severe illness from various viruses and bacteria in comparison to nonpregnant women. Coinfection with COVID-19 and other infection may complicate the course of disease in pregnant women and mayresult in increased maternal morbidity and mortality.Abortions, stillbirth, preterm birth, fetal growth restriction and other deleterious fetal and neonatal outcomes may occur in majority of these infections. COVID-19 infection may result in reactivation of other chronic viral and bacterial infections and may aggravate clinical course. However there is paucity of literature and larger studies.

Objective: To study maternal and perinatal outcomes in pregnant woman with novel COVID 19 infection coexisting with other viral and bacterial infections.

Methods: It is a case series of 6 pregnant females who had COVID-19 infection along with other viral and bacterial infections. 2 of them were typhoid positive and rest were dengue, HIV, hepatitis B and hepatitis E positive along with COVID-19 infection. They were followed either till 1 week of postpartum period or till they became COVID-19 RTPCR negative, whichever was earlier.

Results: Most of the women were asymptomatic or presented with fever or cough and neonatal outcomes were also good. However one maternal mortality and 1 still birth was observed. Details of these cases will be presented in conference.

Conclusions: Pregnant women coinfected with COVID-19 and other infections require multidisciplinary approach and stringent feto-maternal surveillance. In the present scenario, the information and evidences about epidemiology, clinical couse,fetal and neonatal outcomes in these pregnancies are limited. Hence the need of the hour is a large cohort study in these women.

[HRP0854]

Case Series: Predictors of Posterior Reversible Encephalopathy Syndrome in Eclampsia

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Introduction: Posterior Reversible Encephalopathy Syndrome was first described in 1996. It is characterized by spectrum of symptoms ranging from persistent headache, altered consciousness, visual disturbances, seizures to status epilepticus. This clinical syndrome is recognized on MRI showing vasogenic edema seen in white matter commonly in posterior occipital and parietal lobes. The outcome of this syndrome is majorly favorable, with reversible clinical symptoms and brain lesions, if hypertension and seizures are managed timely. Therefore, early management of eclampsia and early suspicion of PRES can produce favorable outcome for the patient.

Objective: To determine the clinical and biochemical predictors of PRES Syndrome in patients with Eclampsia for early detection and timely management of the same.

Methods: The case series involve retrospective review of four eclampsia patients who were diagnosed with PRES Syndrome subsequently. Their clinical presentation, socio-demographic and biochemical profile were studied, to help determine predictors of PRES Syndrome.

Results: All the cases were of young primigravida, with mean age of 22 years. All were referred in view of multiple episodes of seizures and sudden onset of hypertension. Three cases were of antepartum eclampsia and one was postpartum presentation. Only two cases were booked. 3 out of 4 cases required intubation and ICU stay. All four cases had mild to moderately raised levels of serum creatinine and hypoalbuminemia. 3 out of 4 had deranged liver enzymes. In ¾ th of cases diagnosis was made on NCCT. All the cases showed involvement of white matter in bilateral parietal lobes in MRI, with three cases showing bilateral occipital involvement too. It was also noted, the case which was un-booked, had the maximum delay in receiving tertiary care, had the longest stay in intensive unit and longest hospital stay overall. All these patients were managed successfully on magnesium sulfate along with anticonvulsants.

Conclusion: It can be concluded that regular antenatal care, prompt management of hypertension especially in young primigravida along with timely referral to tertiary care can be lifesaving. We have shown that early and prompt management in patients of Eclampsia with PRES Syndrome, with magnesium sulfate and anticonvulsants has favorable long term outcome for the patient.

[HRP0955]

Titrated Oral Misoprostol Versus Fixed Dose Vaginal Misoprostol for Induction of Labour – A randomised control trial

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Introduction: Induction of labour is indicated when the risk of pregnancy to mother or the fetus exceeds the risk associated with process of induction of labour and delivery. Misoprostol is prostaglandin E1 analogue used commonly for induction of labour by various routes of administration. This study further explores the novel concept of titrating misoprostol dose to individual's uterine activity response and minimizing the adverse outcome in quest for an ideal route of administration.

Aim: This study aims to evaluate the safety and efficacy of titrated oral misoprostol in escalated doses for induction of labour compared to vaginal fixed dose regimen.

Objectives: primary objective was to measure and compare the two regimens for proportion of women delivering vaginally within 24 hours of induction of labour and incidence of adverse effects; maternal- uterine tachysystole, perinatal- non reassuring fetal heart rate, meconium stained liqour, APGAR score at 5 min & NICU admission. Secondary objectives included Induction-to-delivery time (in hours), time to achieve active labor (in hours), Rate of delivery within 12 hours, Total dose and duration of misoprostol, Change in bishops score, Rate of caesarean delivery & other Maternal - neonatal outcomes.

Methodology: 100 women were randomised into two groups for induction of labour. Group 1; n=50 titrated oral misoprostol solution and Group 2; n=50 vaginal fixed dose misoprostol. Titrated oral misoprostol group received basal unit of 20 ml (20mcg) of misoprostol solution every one hour (prepared by dissolving one tablet of 200 mcg in 200 ml of water) for four cycles. After four hours, if the subject was not in active labour, the dose was increased to 40 ml (40 mcg) and repeated for another four cycles. If still not in active labour, the dose was escalated to 60ml (60 mcg) for 2 hours and ceased if no response. In vaginal fixed dose misoprostol group women received 25 mcg of misoprostol vaginally every four hours to a maximum of 5 doses.

Results: Both groups were comparable for sociodemographic characteristics. Vaginal delivery within 12 hours and 24 hours were achieved in 92 vs 86% (p=0.392) and 88 vs 84% (p=0.564) respectively in group 1 and group 2, although not significant but was higher in oral titrated misoprostol group. The rate of caesarean was less in oral misoprostol group 14 vs 18% (p=0.447). The induction to delivery time was significantly shorter in group 1 (10.42 ± 6.76 hrs vs 13.02 ± 6.88 hrs; p= 0.023). The average dose of misoprostol required was significantly higher in group 1, 123 ± 96.51mcg vs 73.3 ± 45.52mcg (p=0.007) but the duration of misoprostol exposure was significantly less in group 1 (5.25 ± 3.44 hrs vs 10.18 ± 6.21 hrs; p<0.001) compared to group 2. Successful induction could be achieved in 88 vs 80% (p= 0.245). The incidence of hyperstimulation was slightly higher in group 1 (6% vs 2%; p=0.617) but the rate of PPH was less. (10% vs 18% p= 0.249). No significant maternal and perinatal complications were observed in either group.

Conclusion: The oral titrated misoprostol solution, as inducing agent in the present study, conferred significant benefits in terms of significantly shorter Induction to delivery interval, lesser duration of exposure to misoprostol; although in higher dose, and significantly fewer proportion of women left undelivered at the end of 24 hours.

[HRP0956]

Evaluation of Serum Melatonin Levels in Preeclampsia- A case control study

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Introduction: Melatonin acts as an antioxidant and its levels have to be reduced in PE and there has been significant interest in its possible role in pathogenesis of PE and also as a therapeutic agent.

Aim: This study aimed to evaluate the association of serum melatonin levels in term pre-eclampsia subjects and compare it with normotensive healthy pregnant women. Comparison of its levels were done in severe and non-severe variety of PE. Difference in levels of melatonin was also estimated between early and late onset PE.

Methodology: The study was conducted from November 2018 to October 2019, Delhi. Cases were term pregnant women with PE and meeting the inclusion and exclusion criteria. Controls were healthy normotensive pregnant women matched for age, race and gestational age. As per sample size calculation, 50 cases and 50 controls were enrolled in the study. Night time serum melatonin level were analysed and compared between cases and controls. PE was classified as severe and non-severe based on ACOG Task Force on Hypertension in Pregnancy[1]. Early onset PE was defined as onset of hypertension before 34 weeks and late onset PE as >34 weeks.

Results: Twenty PE cases were severe (40%) and thirty were non-severe PE (60%). Of severe PE cases, 5 had HELLP, along with jaundice in 4 and even 2 also had renal failure. Early onset PE (<34 weeks) was observed in 11 PE cases (55%). Mean value of serum melatonin level was lower in patients with preeclampsia (93.18±61.5pg/ml) in Indian population as compared to controls (109.18±69.86pg/ml), though not statistically significant (p=0.446). Severe PE (47.32±26.88pg/ml) had significantly (p=0.001) lower serum melatonin level when compared to non-severe PE (123.76±59.16pg/ml). No significant difference was seen melatonin levels between early and late onset PE. Significantly lower value were observed (p<0.01) in HELLP variety of PE. Conclusion is melatonin helps to lower blood pressure by acting as an antioxidant. Thereby lowered levels lead to severe manifestations in PE. On plotting ROC curve, severe PE had AUC-88% with sensitivity of 100% and specificity of 70%). Melatonin levels ≤96.9 pg/ml showed 69.00% probability of severe preeclampsia and levels >96.9 pg/ml, 100.00% chances of non-severe preeclampsia. Among severe PE, all (100%) had melatonin level ≤96.9 pg/ml while among non-severe PE, 70.00% had melatonin levels >96.9 pg/ml.

[HRP0957]

A Study to Evaluate The Association of Intrapartum Fetal Distress with Umbilical Cord Artery Ph And Perinatal Outcome

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Introduction: Fetal distress is one of the most serious pathological conditions in the antepartum and intrapartum period and is a major risk factor for significant neonatal mortality and morbidity. It complicates about 1% of labors and results in death in about 0.5 in 1000 pregnancies. Diagnosing fetal distress early to prevent neonatal morbidities is of paramount importance. Presence of MSAF and CTG have been used as predictors of fetal distress. Studies have shown variable association of CTG abnormality and presence of MSAF with fetal acidosis.

Objectives

1. To study association of abnormal CTG and/or meconium stained liquor with umbilical cord arterial blood pH.
2. To study the perinatal outcome of neonates with abnormal CTG and/or meconium stained liquor.

Study Design: Prospective observational study

Subjects and Setting: 206 pregnant women in labour admitted in labour women were included in study conducted from January 2017 onwards, who met the inclusion criteria and rest were excluded based on exclusion criteria. We divided them into two groups-

Cases: Pregnant women booked or unbooked admitted in labour room with a singleton live fetus in cephalic presentation having abnormal CTG and/or meconium in their amniotic fluid.

Controls: Pregnant women booked or unbooked admitted in labour room with singleton live fetus in cephalic presentation having normal CTG findings and absent meconium in their amniotic fluid.

Methodology and Outcome: Total 206 pregnant women in labour were recruited in present study, and we divided them into cases and controls based on the above mentioned basis. All enrolled patients were followed up for the umbilical cord artery pH and studied for their perinatal outcomes. The perinatal outcomes studied included mode of delivery, Apgar score at 1 and 5 minutes, NICU admission, development of respiratory distress, hypoxic ischemic encephalopathy and neonatal jaundice.

Results: The mean pH of umbilical cord blood gas in cases is 7.29±0.08 and in control subjects is 7.32±0.06. The difference between the two groups is significant statistically with a p value of 0.007. The number of subjects with cord blood pH less than 7.2 is 13.4% in case group and 6.42% in control group. The difference between both the groups for subjects with cord blood pH less than 7.2 is statistically insignificant with a p value of 0.091. Among neonatal outcomes only Apgar score at 1 min was significantly low in cases as compared to controls.

Conclusion: The present study showed that indeterminate CTG tracings resulted in increased rate of caesarean sections without any increased risk of any significant adverse neonatal outcomes. In contrast, abnormal CTG was associated with high risk of passage of meconium, presence of acidosis, low Apgar score at 1 minute less than 7, increase in NICU admissions, respiratory distress. Prompt delivery in the indeterminate CTG category group might have prevented adverse perinatal outcomes. The results of this study indicate that presence of meconium stained amniotic fluid might be a useful predictor of intrapartum fetal distress and the role of cardiotocography in diagnosing fetal distress required further studies. Their potential role as a tool for predicting the perinatal outcomes should be evaluated in subsequent studies.

[HRP0958]

Correlation of Bile Acid Induced Placental Inflammation Through Gpbar-1 AND NF-κB Pathway with Foetal Outcome In Ihcp - A case control study

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Introduction: Intrahepatic cholestasis of pregnancy (IHCP) is a cholestatic disorder, characterised by pruritus in the second half of pregnancy, entails an increased risk to the foetus. This study was designed to study the maternal serum bile acid induced placental inflammation by Gpbar-1 and NF-κB pathway and its correlation with foetal outcome in IHCP.

Methodology: The study was conducted from November 2018 to April 2020. 30 pregnant women with IHCP and 30 age and BMI matched pregnant women as controls were enrolled and liver function tests including serum bile acid were measured. All cases and controls were followed for their maternal and foetal outcomes till delivery. After delivery placental tissue analysed for Gpbar-1 and NF-κB gene expression and histopathological features and correlated with various maternal and foetal outcome in controls, cases, mild and severe category of cases. Statistical analysis included independent t test, Mann-Whitney test, ANOVA test and chi square test.

Results: Out of thirty IHCP cases eight (26.67%) were severe and twenty two (73.33%) were mild IHCP. Among 30 IHCP patients six (37.5%) multiparous women had a previously affected pregnancy and three (10%) had family history of IHCP. Maternal complications occurred significantly more in IHCP cases (63.33%) with meconium staining of liquor/MSL (36.67% cases) accounting for the majority of complications. In cases group labour was induced in the majority (56.67%) and most were delivered by normal vaginal delivery (66.67%) however rate of induction of labour (IOL) and caesarean delivery were more in cases as compared to control group. Rate of NICU admission (p=0.001), lower neonatal birth weight (p=0.001) and foetal complications (p=0.005) occurred significantly more in cases (56.67%), prematurity being most common followed by small for gestational age babies. BA evoke placental inflammation in IHCP, studied by expression of Gpbar-1 and NF-κB gene and the histopathological features of placenta. The current study elicited upregulation of Gpbar-1 gene (2.29 fold; p=<0.001) and NF-κB gene (2.097 fold; p=0.002) in IHCP cases as compared to controls. Gpbar-1 gene (p=0.019) and NF-κB gene (p=0.029) were found significantly upregulated by 2.192 and 2.396-fold respectively among cases (n=19) as compared to controls with

adverse maternal outcome (n=8). No significant correlation was found between maternal or foetal outcome and gene expression in both the groups. Grossly there was no difference in placenta of both the groups but significant difference was found between placental histopathological features in IHCP group. HPE features was corelated with maternal outcome but no statistically significant difference was found. But when we correlated the foetal outcome with HPE features we found some significant difference.

[HRP0959]

Second Trimester Thyroid Function Test In Gestational Diabetes Mellitus

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Introduction: The effect of glucose metabolism on thyroid hormone level is not clear. There is paucity of Indian studies comparing thyroid function test in women with gestational diabetes mellitus and normal pregnant women. Significant differences in thyroid hormone level were seen in certain studies whether others found no significant difference. More detailed studies are required to explain this association.

Objective: The purpose of this study is to look for association of thyroid function test with Gestational Diabetes Mellitus and the correlation of adverse pregnancy outcomes with thyroid function test in GDM and non GDM women.

Methods: In the present study 350 pregnant women with period of gestation from 13 weeks upto 28 weeks visiting OPD for the first time or OGTT done at first visit was normal were recruited. Informed consent and detailed history was taken and were subjected to 75 gm OGTT at their first visit. OGTT was again repeated at 24 to 28 weeks of gestation for those having OGTT at first visit less than 140mg/dl. Free T3, Free T4, serum TSH and anti TPO antibody were determined among 40 cases and same number of day matched controls from the previously stored blood sample and patients were followed till delivery and their pregnancy outcomes and neonatal outcomes were observed.

Results: The mean fT3 in GDM group was 2.64 ± 0.56 pg/dl and mean fT3 in non GDM group was 2.98 ± 0.51 pg/dl(p=0.006). The mean fT4 in GDM group was 0.76 ± 0.42 ng/dl and mean fT4 in non GDM group was1.26 ± 0.51ng/dl(p<0.001). The mean serum TSH in the GDM group of women was 2.95 ± 1.1mIU/ml while the mean serum TSH in the non GDM group was 1.33 ± 0.46mIU/ml(p<0.001).The mean value of Anti TPO antibody in the GDM group was 22.12 ± 3.52 IU/ml while in the non GDM group the mean value of Anti TPO antibody was 20.51 ± 2.87 IU/ml(p=0.027).

Conclusion- The mean fT3 and fT4 in GDM group is significantly lower than the non GDM women. The mean TSH in GDM group is significantly higher than non GDM group. The mean value of Anti TPO antibody in the GDM group is significantly higher than the women without GDM though none of them were positive. The mean TSH and Anti TPO Ab values were higher in GDM women with maternal and neonatal adverse outcomes than those without maternal and neonatal outcomes although not statistically significant.

[HRP0960]

Furosemide Vs. Amlodipine in Postpartum Blood Pressure Control: A double blind randomized clinical trial

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Introduction: Hypertensive disorders are the most common medical complications of pregnancy. Hypertension can persist from pregnancy or arise de novo in the postpartum period and continue to pose a risk to maternal well-being. Following delivery, fluid mobilizes to intravascular space resulting in an increase in central venous pressure and pulmonary capillary wedge pressure which favor development of pulmonary edema. The ability of diuretics to lower blood pressure and reduce edema may well curtail this process, and result in better control, shortening of hospital stay, cost, and need for professional supervision.

Objectives: Primary objective was to compare the effectiveness of Furosemide with Amlodipine in management of postpartum hypertension by following parameters: Blood pressure control, time taken for blood pressure control and need for additional antihypertensive treatment. Secondary objectives were to compare the adverse effects (maternal and neonatal) and the frequency of maternal complications in Furosemide vs Amlodipine group.

Methods: 98 women having postpartum hypertension diagnosed within 48 hrs. of delivery and defined as blood pressure recording of systolic ≥ 150 mm Hg and/ or diastolic ≥ 100 mm Hg (2 recordings 4 hrs. apart) or, systolic ≥ 160 mm Hg and/ or diastolic ≥ 110 mm Hg (single recording) were recruited and followed up in the study. These subjects were randomized into 2 groups of 49 each (Group 1: tablet Furosemide 40 mEq OD with tab. Potassium chloride 10 mEq OD and Group 2: tab Amlodipine 5 mg OD with placebo). Outcomes measured were control of blood pressure and time until blood pressure control, need to add another antihypertensive for blood pressure control and frequency of high blood pressure episodes. Data was analyzed by unpaired 't' test, Fisher's exact test and Chi square test for comparisons and non-parametric Mann Whitney test and Kruskal Wallis test was used for association between more than two groups.

Results: Both the groups were comparable for sociodemographic characteristics. The mean systolic, diastolic, and mean arterial pressure were similar for both the groups on the day of recruitment. Mean gestational age at delivery in the present study was 37 weeks in both groups. *Furosemide* resulted in a statistically significant percentage fall in mean systolic (p value 0.02), diastolic (p value 0.04) and mean arterial pressure (p value 0.031) from day 1 to 7th postpartum as compared to those who received amlodipine (10-11% vs. 7-8%). The requirement of additional antihypertensive was higher in the amlodipine group (59 % vs. 38%) compared to furosemide treatment group.

Response to treatment in the form of a greater fall in the systolic, diastolic, and mean arterial pressure was better in group 1 subjects who received furosemide among all classes of HDP except for preeclampsia with severe features. The response was significantly better in *denovo* postpartum hypertension (mean SBP 149±3.88 vs. 142±6 mm Hg; p value 0.05).

Conclusion: Furosemide accelerates the blood pressure recovery and provides a better and faster blood pressure control in postpartum hypertension, reducing the need for additional antihypertensive drugs leading to substantial savings for health care system.

[HRP0961]

Outcome of Pregnancies with Morbidly Adherent Placenta

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Introduction: Morbid adherent placenta (MAP) is an abnormality of placental implantation that is an important cause of maternal and fetal mortality. The maternal mortality may reach up to 7% and is associated with multiple maternal morbidities e.g. massive transfusions, infections, urologic injuries and fistula formation.

Objective: To evaluate the profile and outcome of pregnancies diagnosed with MAP over three years.

Methodology: The present study was a retrospective observational study from January 2017 to December 2019.

Results: Forty nine patients were diagnosed with MAP. The incidence was 1.21 per 1000 pregnancies. A majority of patients were multi gravidas and had a history of previous caesarean section(CS). Placenta previa was present in 61.2% patients. Forty seven patients had to undergo a hysterectomy and 75% of patients had to undergo the internal iliac artery ligation to achieve hemostasis. 31 patients (63.2%) required intensive care admission and monitoring. There was one death in our cohort.

Conclusion: MAP is an important cause of maternal morbidity and mortality and its incidence has been on the rise due to increased CS deliveries. CS and placenta previa are important risk factors for MAP. Early recognition of at risk pregnancies and subsequent risk based counselling and management can help optimise the outcomes in MAP.

[HRP0962]

A Study To Find A Critical Level Of Alanine Transaminase To Predict Pregnancy Outcome In Intrahepatic Cholestasis Of Pregnancy

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Introduction: IHCP is a cholestatic disorder of second and third trimester of pregnancy causing pruritis without a rash in the mothers and is found to be associated with adverse perinatal outcomes. These outcomes are found to occur above a critical value of serum bile acids. (>40 µmol/L) Early term delivery at 37 weeks is indicated before these levels are reached to avoid adversities. In settings where bile acid testing is not available, serum transaminases are used to diagnose IHCP.

Objective: To correlate the maternal and foetal outcomes in patients with IHCP with their alanine transaminase levels at diagnosis and to find a value predictive of adverse outcomes.

Methods: It is a prospective case control study where 75 cases of IHCP (singleton pregnancy, third trimester, pruritis without rash and raised serum transaminases) and 75 controls with matching demographic criteria, were included. Women with gall stones, pruritis due to preexisting skin disease, viral hepatitis, chronic liver disease, pregnancy specific causes of elevated liver enzymes like preeclampsia, HELLP and acute fatty liver of pregnancy, and those on drugs that effect LFT were excluded. They were followed up for occurrence of adverse perinatal outcomes, and their liver function tests at diagnosis were noted. The normal values of ALT and AST in 3rd trimester were taken to be 6-32 U/L and 11-30 U/L respectively.

Results: IHCP led to increased inductions of labour. In spite of that there was no significant rise in the rates of instrumental and caesarean deliveries. Also, the cases delivered significantly earlier than controls (37.49 weeks versus 38.613 weeks).

A significantly higher number of IHCP mothers had babies born with meconium stained liquor. The incidence of preterm delivery, IUD, babies born with 5 minute APGAR<=7, non reassuring foetal heart rate, respiratory distress in babies and NICU admission was no different in the case group than the control group.

Further, we established a positive correlation between the occurrence of MSL (p value 0.041), IUD (p value 0.01), and NICU admission (p value 0.006) in IHCP patients and their maternal serum ALT levels.

A cutoff of 133 U/L at the time of diagnosis can be used for predicting the occurrence of adverse foetal outcomes, with a sensitivity of 65.7% and specificity of 82.5% and with a positive likelihood ratio of 3.76.

Conclusion: IHCP does lead to adverse foetal outcomes, however pruritis seems to be the only maternal distress. Apart from serum bile acids, ALT levels can be used to predict an overall adverse foetal outcome, above a level of 133 U/L. This is especially useful in settings where serum bile acid testing is not available. Management can be optimised and complications of prematurity due to early induced delivery can be avoided if adverse outcomes can be predicted.

[HRP1063]

Gestational Age at Delivery and Maternal and Perinatal Outcomes in Women with Intrahepatic Cholestasis of Pregnancy (IHCP)

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Introduction: IHCP is a disease of exclusion with pruritis along with unexplained elevated levels of liver enzymes and/or elevated serum bile acids which resolve after delivery. It is associated with increased rates of caesarean delivery, postpartum hemorrhage, spontaneous preterm labour, antepartum passage of meconium, fetal distress, fetal asphyxial events, fetal mortality and NICU admission.

Objectives: To study the gestational age at delivery and its association with maternal and perinatal outcomes in women with IHCP.

Method: Pateints with IHCP beyond 28 weeks of gestation were evaluated clinically. Liver function tests (LFT) along with serum Bile acids were done every 2 weekly. They were managed according to hospital protocol. Decision for induction of labor or spontaneous delivery was taken according to department/ unit protocol and trend of biochemical tests such as AST, ALT and serum bile acid. Pateints were followed up till delivery and 2 weeks postpartum. Adverse maternal and perinatal outcomes were noted. LFT was done 2 weeks postpartum.

Result: A total of 150 cases of IHCP were recruited of which 77.3% were cases of mild IHCP and 22.7% were severe IHCP. Induction of labour was done in 87.3% of patients and 10% delivered spontaneously. Elective cesarean section was done in 2.7%. Maximum number of patients 74.7% (N=112) were induced between 37-38+6 weeks gestation. Preterm delivery occurred in 5.9% of patients. Cesarean rate observed was 34% and did not alter significantly with different gestational age at delivery. Major PPH was observed in 1.3% (2) of patients. There was one case of stillbirth. Low birth weight babies were 26% (39). There was one case of stillbirth and one case of asphyxia. Meconium stained liquor was seen in 9.3% (14) of patients. NICU admission and neonatal jaundice was seen in 9%(6) and 8.7% (13) patients respectively and was significantly higher in babies delivered at earlier gestational age.

Conclusion: In patients with IHCP, termination of pregnancy can be considered after 37 completed weeks. In those patients who show a rising trend of serum bile acid >40 µmol/L or those who have values above 100 µmol/L, termination should be considered after 34 completed weeks due to risk of stillbirth keeping in mind the risks of prematurity. Therefore the decision for termination of pregnancy should be individualized taking into account the serum bile acid level of the patient.

[HRP1064]

Pre-Induction Doppler Indices and Cerebro Placental Ratio at Term as A Predictor of Adverse Fetomaternal Outcome- A tertiary care hospital study

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Introduction: Induction of labour (IOL) is the stimulation of uterine contractions with or without rupture of membranes. The overall incidence of IOL has increased globally. Since the 1980s, rates of induction of labour have steadily increased. In general, it is universally accepted that IOL is indicated when it is thought that the outcomes for the fetus, the mother, or both are better than with expectant management, that is waiting for the spontaneous onset of labor.

The indications for IOL are based on maternal fetal and combined reasons. Various methods have been used to induce labour. Medical methods are more commonly used like prostaglandins (PG) especially PGE2 and oxytocin. Success of induction of labour is taken as vaginal delivery. Various scoring systems and prediction model systems and nomograms have been proposed for predicting success of IOL and fetomaternal outcome but, none have been authenticated yet.

One recent study was done by Widschwendter P who assessed the Doppler ultrasound of the fetal middle cerebral artery (MCA) and of the umbilical artery (UA) as prognostic marker in addition to evaluation of the Bishop score in 49 women around the expected date of confinement (38-42 weeks of gestation) preceding planned pharmacological induction of labour and they showed that there was positive correlation between abnormal MCA RI (resistive index) and perinatal outcome.[10]

There were no standard reference range of doppler indices per se for Indian population or standard cut off for CPR values and there were only scant studies based on AGA babies. There were scanty literature with respect to single cross-sectional MCA and UA doppler prior to induction of labour to assess the usefulness of doppler in management and planning of termination of labour with respect to safety of induction of labour and prediction of fetomaternal outcome. This poses an open question as to whether Doppler CPR (Cerebro Placental Ratio) can be used routinely to predict fetomaternal outcome prior to induction of labour at term regardless of fetal size.

Objective: To assess the use of pre-induction Doppler indices including CPR at term as a predictor of fetomaternal outcome.

Methodology: The study was carried out in the Department of Obstetrics and Gynaecology in association with the Department of Radiology, tertiary care hospital, between the months of August 2018 and February 2020.It was a prospective study where 200 antenatal women were included based on a predefined criterion.

Results: The present study found that CPR (MCA PI/UA PI) < 10th centile at 1.1 cut off, done within one or two days prior to IOL in term pregnancies >=37 weeks, to be independently associated with APGAR score< 7 at 1 min which was statistically significant with AUC of >7 in ROC curve.

The overall diagnostic accuracy of CPR as a routine test was good at 85% accuracy yet, it had low sensitivity (11.1%) and high specificity (96.5%) as explained above. The present study found significant correlation of higher MCA RI (0.68 vs 0.61) with rate of operative delivery compared to vaginal delivery. The present study found that Mean MCA Pulsatality Index PI values (1.0 vs 1.3) were significantly lower among fetuses who had abnormal APGAR score of <7 at 1 minute of birth.

Conclusions: As there is scanty literature hopefully the present study will open up the pathway for more similar studies regarding assessment of the role of doppler studies prior to induction of labour as nowadays the Doppler machines and the overall cost are in the decreasing trend and so it can be done at affordable cost routinely.

[HRP1065]

Role of Serum Homocysteine Levels in Abruptio Placentae and The Fetomaternal Outcome

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Introduction: High serum homocysteine level is considered as a risk factor for placental abruption. Placental development in early pregnancy may be negatively influenced by increased maternal homocysteine concentrations. Moderately elevated homocysteine concentrations may induce cytotoxic and

oxidative stress, leading to endothelial cell impairment. Additionally, exposure of trophoblast cells to homocysteine may increase cellular apoptosis and lead to inhibition of trophoblastic function. Maternal plasma homocysteine concentration at various stages during normal pregnancy tends to be lower than in nonpregnant women. Placental abruption has been associated with an increase in the risk of stillbirth, preterm delivery, haemorrhage, need for hysterectomy, DIC and death.

Objective: The aim of the study was to determine the role of serum homocysteine levels in patients with abruptio placentae and to study the fetomaternal outcome in these patients. Fetomaternal outcome is seen terms of mode of delivery whether vaginal of caesarean, period of gestation whether term or preterm, need of blood transfusion, stillbirths, early neonatal deaths and NICU admission.

Methods: In this prospective observational study conducted in a tertiary hospital from 2018-2020, 50 pregnant women with abruptio placentae were included. Eligible pregnant women were recruited from labour room and wards. Informed consent was taken, thorough clinical examination was done and history was taken, prior investigations like ultrasound were studied and their serum homocysteine levels were measured by ELIZA method using commercially available kits. The obtained data was statistically analysed using Statistical Package for Social Science (SPSS) version 21.0.

Results: Serum homocysteine levels were found to be elevated in all cases, ranging from 32.0 **µmol/L to 165 µmol/L** and mean homocysteine level +-Std. deviation is 62.57 +- 21.79 **µmol/L**. The rate of caesarean section was 44%, preterm delivery was 64% and stillbirth was 38% in these cases with mean homocysteine levels of 65.1± 28.08 **µmol/L**, 61.02 ± 18.12 **µmol/L** and 62.84 ± 23.89 **µmol/L** respectively. Retroplacental clots were present in 60% of cases and blood transfusion was received by 96%. No significant association was seen between serum homocysteine levels and the different fetomaternal outcome.

Conclusion: Hyperhomocysteinemia is seen in cases with abruptio placentae. The rate of caesarean section, preterm delivery, stillbirth and need of blood transfusion is high but no significant association is seen.

[HRP1066]

Evaluation of Pregnancies with Low Lying Placenta Dignosed on Midtrimester USG

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Placenta previa is defined as a placenta that is implanted somewhere in the lower uterine segment, either covering the internal cervical os or very near to it, precisely within 2 cm wide perimeter around the os. The reported incidence of placenta previa varies according to gestational age. It is approx. 5% in the second trimester and 0.5% at term. Placenta previa is associated with significant maternal morbidity in the form of massive obstetric hemorrhage, hypovolemic shock and peripartum hysterectomy.

Objective: To assess the incidence of persistence of placenta previa at 3rd trimester in patients diagnosed with low lying placenta in second trimester USG and co-relation with various risk factors. Study Design: Prospective observational study Study Population: Pregnant patients diagnosed with low lying placenta/placenta previa on midtrimester USG.

Study Methodology: We conducted a prospective study of 160 patients with low lying placenta/placenta previa diagnosed during midtrimester USG between 16-24 weeks. Repeat USG was done in 3 rd trimester and on the basis of persistence of placenta in lower segment, patients were divided into 2 groups i.e placenta previa group and non placenta previa group. Incidence of persistence of low lying placenta/placenta previa was noted. Evaluation of various risk factors for placenta previa and perinatal outcomes were studied in these 2 groups. Data was compiled and statistically analyzed.

Findings: The incidence of low lying placenta/placenta previa on midtrimester USG was found to be 12% in present study.

Out of 160 patients of present study, placenta migrated to upper segment in 94.4% and persisted in only 5.6% cases at term.

The risk factors which were independently associated with placenta previa were advanced maternal age (>35 years), was present in 33.3 % of placenta previa group and 19.2% in non placenta previa group. History of infertility treatment was present in 33.3% cases in placenta previa group and 18.5% in non placenta previa.

Caesarean section was performed in 100% cases of placenta previa and 72.8% cases in non placenta previa group.

Blood transfusion was required in 11.1% cases in placenta previa and 2 % in non placenta previa group

Conclusion: A careful evaluation of risk factors and localization of placenta in midtrimester and 3 rd trimester will forewarn the obstetrician, so that the timely required arrangements and referral to a tertiary care centre can be organized..

[HRP1067]

Fetal Cerebroplacental and Cerebrouterine Ratio In Hypertensive Disorders of Pregnancy

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Introduction: Hypertensive disorders of pregnancy complicate around 10% of pregnancy. Hypertensive disorders of pregnancy lead to abnormal placentation, which leads to defective utero-placental blood flow. Doppler ultrasonography of the Umbilical Artery (UA), fetal Middle Cerebral Artery (MCA) and Uterine Artery (UtA) has been used in the evaluation of uteroplacental blood flow. It has been seen that MCA/umbilical artery ratio has better sensitivity in predicting adverse perinatal outcome compared to MCA or umbilical artery individually. Cerebrouterine ratio (CUR) compares the Doppler indices of the MCA with that of the UtA. Therefore the purpose of this study is to calculate CUR in late 3rd trimester and to see the adverse perinatal outcome and also to compare whether CPR or CUR is better indicator of adverse pregnancy outcome

Objective: To compare fetal cerebroplacental ratio (CPR) and cerebrouterine ratio (CUR) by USG Doppler at 34 weeks or more in hypertensive disorders of pregnancy with normotensive pregnancies matched for the period of gestation.

Methods: USG biometry was performed on all the patients. Biparietal Diameter (BPD), Head Circumference (HC), Abdominal Circumference (AC) and Femur Length (FL) were determined and Estimated Fetal Weight (EFW) was calculated using Hadlock's formula.

USG Doppler examination of the Umbilical Artery (UA), bilateral Uterine Arteries (UtA) and fetal Middle Cerebral Artery (MCA) was performed on patients in the case and the control groups.

The Systolic/Diastolic ratio (S/D), Pulsatility Index (PI) and Resistance Index (RI) were determined in the UA, bilateral UtA and the fetal MCA. Subsequently, cerebroplacental ratio (CPR) and cerebrouterine ratio (CUR) were calculated.

Results: The incidence of induced labor, incidence of emergency Caesarean, duration of hospital stay after delivery were statistically significantly higher in the case group as compared to the control group. CUR in the case group was significantly lower than the control group (**p<0.001**). On comparison there was no significant difference in CPR between case and control groups (**p=0.295**).

Conclusion: Both abnormal CPR and CUR were associated with poor outcome but CUR had better predictive value compare to CPR. In hypertensive disorders of pregnancy the mean value of both CPR and CUR is significantly lower compare to normotensive pregnant patients. However further studies with large sample size with early onset and severe preeclampsia should be conducted.

[HRP1068]

Screening for Small for Gestational Age Fetus Using Risk Factors and Symphysiofundal Height [Intergrowth 21st Standard]

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Introduction: The prevalence of small for gestational age is 27% of live births globally whereas it is 46.9% in India alone. There is a need of clinical screening methods in low resource setting to enable triage of highrisk pregnancies. There is a paucity of data for using symphysiofundal Height (SFH) and risk factors from low resource setting where it is more relevant. There are no published reports in Indian setup using INTERGROWTH 21 (International Fetal and Newborn Growth Consortium for the 21st Century) standards. The ideal approach would be combining the conventional items, such as obstetrical history and maternal morbidity, with an objective assessment of uterine growth in clinical practice. Serial ultrasound scans would be uneconomical or even impossible to screen all pregnant women. To use such methods economically, it would be imperative to identify a high-risk group with the use of clinical methods.

Objectives: The objectives of this study were to to study diagnostic performance of clinical palpation, symphysiofundal height, risk factors and their combinations to detect small for gestational age babies and to develop clinical risk score using symphysiofundal height and modified RCOG risk factors.

Methods: This was a prospective study where 1000 pregnant women with singleton pregnancy with period of gestation between 20 to 36 weeks were recruited. Clinical abdominal palpation, symphysiofundal height measurement and risk factors were used as a screening tool for fetal growth. Small for gestational age was defined as per post-natal INTERGROWTH 21st growth chart.

Results: Incidence of small for gestational age in our study population was 11.7% (117 babies). Combination of risk factors along with symphysiofundal height yielded better sensitivity than with clinical palpation (91.5% in symphysiofundal height vs 85.5% in clinical palpation). The sensitivity, specificity, positive predictive value and negative predictive value of combination of all the three methods was 92.3%, 70.8%, 29.5% and 98.6% respectively. This combination had the highest sensitivity and negative predictive value. Preeclampsia (OR: **5.3, 95% CI 2.6-10.7**, *p<0.0001*), gestational hypertension (OR:2.7, 95% CI 1.4-5.0, *p=0.0014)*, chronic hypertension (OR: **4.5, 95% CI 1.8-11.1,** *p=0.0009)* and underweight (OR: 2.3, 95% CI 1.0-5.2, *p=0.04*) were significantly associated with small for gestational age. Advanced maternal age, nulligravida, diabetes mellitus, history of SGA and history of still birth were not associated with small for gestational age significantly.

Conclusion: Combination of symphysiofundal height, clinical palpation and risk factors can be used to detect small for gestational age in primary health primary and secondary levels of health care system where there is limited availability and accessibility to ultrasound and doppler and this approach is practically and economically feasible. Pregnant women with preeclampsia, gestational hypertension, chronic hypertension and low body mass index (<18.5) are need to be monitored carefully for fetal growth restriction.

[HRP1169]

Protein C and Protein S Abnormalities in Patients with Placental Abruption and Its Association with Adverse Feto-Maternal Outcome

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Introduction: Placental abruption is an important cause of maternal and fetal morbidity and mortality. Inherited thrombophilia, which includes Protein C and Protein S deficiency, is an important risk factor for abruption.

Objective: To find the prevalence of Protein C and Protein S abnormalities in patients with placental abruption and its association with adverse feto-maternal outcome.

Methods: A prospective observational study conducted in a tertiary hospital India from 2018 to 2020 for a period of 18 months. All pregnant women with abruption (n=254) were recruited. Peripheral blood samples of patients were collected in 3.2% sodium citrate vacutainers. All these coagulation investigations were performed on compact ceveron Alpha

Automated Coagulation Analyzer (Compact bio-sciences Ltd),based on clotting, chromogenic and turbidimetric analysis. Adverse feto-maternal outcome was assessed by finding out the proportion of Prematurity, small for gestation age (SGA), Neonatal intensive care (NICU) admissions, Intra Uterine Death (IUD), number of maternal death, vaginal deliveries, caesarean section, blood transfusion

Result: 222 out of 254 cases had protein C in the normal range i.e 67-135 (87.40%). 1 patient had (0.39%) had protein C deficiency and rest 12.20% had protein C level greater than normal range.

Out of 254 subjects no case had protein S deficiency. About 43.70% had normal protein S value (33-101). 56.30% subjects had value greater than normal range .Range was between 53-148 and mean value was 103 ± 16.51.

Adverse fetal outcome was assessed in the patients having abnormal protein C and protein S values, here, mainly those having values greater than the normal range.

In our study 1.40% had NND, 6.99% had IUD, 8.39% had perinatal mortality, 39.16% had blood transfusion,26.57 % had LSCS, 40.56% had SGA, 29.32% NICU admission in subjects with abnormal protein S value. For those with normal protein S value 4.50% had NND, 6.31% had IUD, 10.81% had perinatal mortality, 39.64% had blood transfusion, 39.64 % had LSCS, 40.56% had SGA , 29.81% had NICU admission.

3.13% of those with abnormal protein C had IUD, 6.25% had perinatal mortality, 3.13% had NND, 34.38% had blood transfusion, 43.75% had SGA babies, 22.58% had NICU admission, 25 % had LSCS. For those with normal values, 2.70% had NND, 7.21% had IUD, 9.91% had perinatal mortality, 40.09 % had blood transfusion, 40.54% had SGA, 30.58% had NICU admission,33.33 % had LSCS.

Conclusion: Protein C and Protein S deficiency was not found in our patients with abruption rather the values were greater than the normal range. No significant adverse feto-maternal outcome was found in patients with values of Protein C and Protein S greater than normal.

[HRP1170]

Maternal Outcome of Emergency Obstetric Referral to A Tertiary Care Hospital

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Introduction: Maternal morbidity and mortality remains a major challenge to health care system globally. Referral services for identification and referral of high risk pregnancies are an integral part of maternal and child health services. Timely and appropriate referral to higher and well equipped centers with provision of Emergency obstetric care (EmOC) is very crucial.

Objectives: To determine profile and maternal outcome of emergency obstetric referrals.

Methods: An observational study was conducted in Department of Obstetrics and Gynaecology in a tertiary care hospital, New Delhi. Time period of the study was 18 months from October 2018 to March 2020. Out of all referred women 224 were selected for the study after taking written consent.

Results: Referral rate of obstetric cases were 16.4%. The age of referred women ranged from 18-39 years with mean age being 25+3.9 years. Nearly 2/3rd i.e. 65.2% were either illiterate or had only primary education. Most of the referred women were multigravida i.e. 59.4%. Commonest obstetric causes for referral were hypertensive disorders of pregnancy i.e. 18.2%, previous LSCS i.e. 14.5% and antepartum hemorrhage i.e. 10.7%. Commonest medical cause for referral was anemia i.e. 78.4%. Main reasons for referral to our hospital were non availability of operation theatre (OT), blood bank, ICU and NICU.

Out of 224 referred women, 3 antenatal women expired, 4 had abortion, in remaining 217 women 38.71% women undergone LSCS. A total of 8% women required ICU admission. Maternal mortality occurred in 3 women (1.3%).

Conclusions: India contributes a higher proportion of global maternal deaths. It is estimated that with one maternal death, 15% pregnancies develop complication which necessitates emergency obstetric care. Hence strengthening of Basic Emergency Obstetric & Newborn care (BEmONC) services at the primary and secondary health care levels in terms of surgical infrastructure, equipments and care personals is the need of the hour. Timely and appropriate referral to higher and well equipped centers is very crucial to reduce maternal morbidity and mortality.

[HRP1171]

A Study of Blood Coagulation Profile in Pregnant Women with Pre-Eclampsia

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Introduction: Normal pregnancy is associated with profound changes in the coagulation and fibrinolytic system leading to a hypercoagulable state. Preeclampsia is an idiopathic multisystem disorder specific to human pregnancy and the puerperium. Hematological abnormalities such as thrombocytopenia and decrease in some plasma clotting factors may develop in preeclamptic women. Subtle changes consistent with disseminated intravascular coagulation (DIC) are potentially serious. Thus, coagulation testing is common in these patients for evidence of DIC and HELLP (hemolysis, enzyme elevation and low platelet) syndrome. Hence, this study was undertaken to compare the coagulation profile in pre-eclamptic patients with normotensive pregnant patients.

Objective: To study and compare four coagulation parameters that are platelet counts, PT, aPTT and INR among pregnant women with pre-eclampsia and normotensive pregnant women.

Method: The present cross sectional, descriptive, comparative, hospital based study included normotensive pregnant women and pregnant women with signs and symptoms of pre-eclampsia >28 weeks of gestation done on a total of 250 women pregnant women between age 19-35 years in the Department of Obstetrics and Gynaecology, Pt. B.D. Sharma PGIMS, Rohtak. They were further subdivided into two groups: group A women with pre-eclampsia (n=125) & group B normotensive pregnant

women (n=125) carried out over a period of one year (From February 2019 – April 2020). Four coagulation parameters were used for assessment. They were Platelets, Prothrombin time (PT), activated partial thromboplastin time (aPTT) and International Normalised Ratio (INR).

Results: Platelet counts of group A women was 109760±32421.46 and 187520±31833.38 in group B, which was found to be statistically significant (p <0.001). Similarly, PT 13.12±2.40, aPTT 33.08±6.44 and INR 1.13±0.33 was also higher in group A women respectively as compared to group B (p <0.001) and found to be statistically significant. A total of 34(27.2%) women had increased prothrombin time in group A and 9(7.2%) in group B; 31(24.8%) women had increased aPTT in group A and 6(4.5%) in group B. A total of 46(36.8%) women had increased INR in group A and 3(2.4%) in group B. The difference of all parameters among both the groups was found to be statistically significant (p <0.001).

Conclusion: It is concluded from our study that there occurred derangements of coagulation parameters in platelet count, PT, aPTT and INR in pregnant women with pre-eclampsia. Thrombocytopenia and increased values of PT, aPTT and INR were found in the cases in this study.

[HRP1172]

Study of Determinants of Persistent Postpartum Hypertension at 6 Weeks in Women with Pre Eclampsia

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Introduction: Persistent hypertension at 6 weeks is defined as 1) systolic blood pressure >140 mmHg; 2) diastolic blood pressure >90 mmHg ; 3)use of anti hypertensive agents.

Various clinical and biochemical factors affect the development of persistent postpartum hypertension. Most of the studies have addressed antepartum disease of pre eclampsia. Persistent post partum hypertension is an area which has not been studied in detail. Postnatal review at 6-12 weeks after delivery provides an opportunity to identify these women with higher chances of developing chronic hypertension. Identifying these women will help in appropriate counseling and to initiate preventive measures to decrease their cardiometabolic risk.

Objective: To study the clinical and biochemical determinants of persistent postpartum hypertension at 6 weeks in women with pre eclampsia and proportion developing postpartum hypertension at 6 weeks.

Method: This prospective study was conducted on 150 women delivering with pre eclampsia. Detailed history of antenatal period including past history and family history was taken. Demographic, clinical and biochemical profile was taken antenatally, 24 hrs after delivery and 6 weeks postpartum and were compared. Anti hypertensive prescribed according to hospital protocol. And associated complications were recorded. Women asked to maintain BP records weekly postpartum and followed at 6 weeks.

Results: The overall follow up rate at 6 weeks postpartum was 83.3%(125). Among 125 women, 25(20%) develop persistent postpartum hypertension. Clinical and biochemical factors were compared between the two groups.

High BMI and multiparity were independently associated with development of persistent postpartum hypertension. History of hypertension in previous pregnancy and family history present in 56% and 28% respectively. 72% of women developing persistent postpartum hypertension had early onset pre eclampsia. Among biochemical parameters, at admission serum creatinine levels were significantly higher in women developing postpartum hypertension 0.90±0.09 mg/dl as compared to normotensive women i.e 0.54±0.14 mg/dl. At admission, serum cholesterol levels and serum triglycerides were also higher as compared to normotensive women 254.64±86 mg/dl and 189.13±57 mg/dl; 180.77 mg/dl and 139.64 mg/dl respectively.

Conclusion: Women with pre eclampsia who have higher BMI, multigravida, with family history, history of hypertension in previous pregnancy, DM, MI, deranged lipid profile are at high risk for development of persistent post partum hypertension.

[HRP1173]

Use of Flash Glucose Monitoring for Evaluating Glycaemicvariability, Accuracy and Patient Satisfaction in Pregnantwomen with Diabetes

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Introduction: Diabetes poses adverse maternal and foetal outcome, both during pregnancy aswell as later on in life. A strict maintenance of normoglycemia and reduction in extreme excursions of blood glucose which is now estimated as glycaemic variability (GV) becomesvery essential to avoid adverse fetomaternal outcome. Therefore, newer tools are required todetect these glucose excursions which helps in tighter control and better fetomaternaloutcome.

Objective

1. Comparison of GV using self-monitoring of blood glucose (SMBG) and flash glucose monitoring (FGM) by ambulatory glucose profile (AGP) in pregnant women withdiabetes.
2. Number of episodes and duration of hypo- and hyperglycaemia detected by SMBG and AGP.
3. Measuring the accuracy of FGM as compared to SMBG
4. User acceptability of FGM as compared to SMBG.

Method: A total of 70 pregnant women with diabetes were enrolled for this study, conducted at a tertiary care hospital. Blood glucose monitoring was done by SMBG and FGM for 3 days.

Result: Out of 70 recruited pregnant women, 62 had GDM, 3 had Type 1 DM and 5 had Type 2 DM. A total of 19,950 and 1470 readings were obtained by FGM and SMBG over 3days respectively. A positive Pearson's correlation coefficient (r>0.89) was obtained betweenthe SMBG and FGM suggesting an excellent accuracy of FGM. Significant difference (pvalue<0.001) was seen between minimum blood glucose by SMBG (72.74±18.30 mg/dl) and FGM (52.49±15.42 mg/dl). FGM detected three times more duration of hypoglycaemic episodes (20.9%) which were missed by SMBG (14.7%, p<0.5). Rate of detection of hypoglycaemic event by SMBG was 45% and 94%

by FGM (p<0.001). No significant difference was observed in maximum glucose level or duration of hyperglycaemia by both methods. FGM was able to detect hyperglycaemia in 74% population vs. 52% by SMBG(p<0.001). Mean of GV calculated (MODD) by FGM was 118.4±52.4mg/dl and by SMBGwas 83.2±53.2 mg/dl (p<0.001). All women preferred FGM as compared to SMBG(p<0.001). No major side effects were noted due to the insertion of FGM device.

Conclusion: This is the first pilot study to assess GV, accuracy and patient satisfaction byFGM in pregnant women with GDM. FGM had a good agreement with SMBG. GV and hypoglycaemic excursions were significantly missed by SMBG vs. FGM. All womenpreferred FGM over SMBG. Thus, FGM can prove to be a better emerging tool for controlling blood glucose in GDM and help clinicians to tightly titrate the appropriate intervention required.

Theme: Benign Gynaecological Conditions

[BGC0101]

Differential Loss of Fat in Polycystic Ovary Syndrome: Welcome or warning sign

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Introduction: Lipodystrophy syndrome is a rare disorder characterized by selective deficiency of adipose tissue and severe insulin resistance resulting in metabolic complications. Its presentation as polycystic ovary disease (PCOD) is even rarer.

Case Description: We present case of 23 yr old female who came with complaints of oligomenorrhoea and hirsurtism. When specifically asked she accepted noticing loss of fat from some areas of body. Examination showed loss of fat from face, buttocks and thighs. Her investigations revealed deranged blood sugars, transaminitis, dyslipidemia and elevated serum testosterone; ultrasonography showed fatty liver and polycystic ovary. Fat composition measurement revealed loss of fat from lower limbs and increased ratio of trunk to leg fat. Depending on these findings, diagnosis of lipodystrophy was made. She was started on metformin, statins and ursodeoxycholic acid. Blood sugars, lipid profile and dyslipidemia improved over a period of 6 months.

Conclusion: To conclude we suggest that in lean PCOD patients lipodystrophy becomes a differential diagnosis, so attention should be paid on body fat distribution in them. Despite normal BMI these patients tend to develop metabolic complications as it was there in our patient (BMI 21.5). This diagnosis has long term implications in view of its significant association with metabolic complications.

[BGC0102]

Role of MRI in Evaluation of Isthmocele

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Introduction: Caesarean section is one of the most commonly performed surgical procedure worldwide. Increasing number of caesareansections can lead to more number of complications. One of the complication is isthmocele ("cesarean scar defect" or "niche") representing an inadequate healing of the myometrium at the site of cesarean incision. Isthmocele is associated with various gynaecological and obstetric complications. Uterine rupture, ectopic cesarean scar and morbidly adherent placentaare rare complications during pregnancy. It can also lead to postmenstrual spotting, dysmenorrhea, dyspareunia or chronic pelvic pain and infertility.Additionally, it may increase the risk for complications in procedures such as intrauterine device placement, evacuation and embryo transfer. The purpose of our study is to arouse interest in using MRI in evaluation of isthmocele.

Objective: To study the presence of isthmocele in post cesarean women using MRI and its correlation with risk factors.

Method: This was a prospective observational study. 90 patients were enrolled at the time of discharge of caesarean delivery and were advised to come for follow up at 3-4 months for detection of isthmocele. A total of 82 patients reported for follow up and TVS and MRI Pelvis were done for visualization of isthmocele. If isthmocele was diagnosed, its correlation with risk factors was studied.

Results: On TVS isthmocele was present in 11 patients and on MRI in 16 patients. Detection rate was 77.07% in comparison with previous studies. Compared to MRI, sensitivity of USG was 68.75% however the specificity and positive predictive value for both were 100%. The negative predictive value for USG compared to MRI was 92.96%. Shape of the isthmocele was triangular in most women. Obesity, prior history of cesarean delivery, elective cesarean, gestational diabetes, pre eclampsia and prolonged active labor were associated with development of isthmocele.

Conclusion: The study concluded that yield of diagnosis of isthmocele by MRI was far better than TVS. Obesity, gestational diabetes, preeclampsia, prior history of cesarean, elective cesarean and prolonged active labor, were associated with development of isthmocele.

Keywords: Isthmocele, Cesarean scar defect, Magnetic Resonance Imaging, Ultrasonography

[BGC0103]

Spectrum of Gynaecological Pelvic Masses in Adolescent Age Women Entailing Surgical Management

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Introduction: In adolescent age group, pelvic masses may originate from either the gynaecological organs such as uterine adnexa (most common), uterus or cervix, or from other

pelvic organs such as GIT, bladder, ureters and renal organs. These might be asymptomatic or may present with acute or chronic symptoms. Incidence and type of pathology is similar to prepubertal age group. Management of the pathology with preservation of fertility is the main challenge in this age group. The study highlights the clinical features and management of these masses and their unusual presentations in adolescent age women and importance of laproscopic approach to improve the outcome in these patients.

Objective: To study different clinical presentations, course of disease, management and outcome of different surgically managed gynaecological pelvic masses in adolescent age women.

Methods: The course of management of nine women in adolescent age group visiting OBG Department of PGIMS Rohtak between January 2019 to March 2020 with gynaecological pelvic masses was studied retrospectively and outcome was compared in terms of type of mass, clinical presentation, surgery offered, need for post surgery treatment, and recurrence in 6month duration (if any).

Results: The mean age of girls presenting was 17.33 years. Majority of the girls presented with complaint of insidious onset pain abdomen of short duration. Mean duration of disease from time of onset of complaints to presentation at hospital was 3.8months. Most of these masses were of ovarian origin. Out of them, 55.56% patients were managed by laproscopic approach. Of the total patients, 33.33% patients had neoplastic lump and needed post surgery chemotherapy. Histopathology of one of the patients unusually revealed a poorly differentiated granulosa cell tumor. One patient had unusual contralateral recurrence of the ovarian teratoma after 12months. Histopathology of one patient revealed borderline malignancy and was kept on close follow up.

Conclusion: Early diagnosis and planning early surgery in the surgery entailed cases is necessary to improve outcome in these patients.

[BGC0104]

Effect of Mode of Delivery on Levator Hiatus Biometry and External Anal Sphincter Morphology

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Introduction: Stretching of levator hiatus (formed by decussating fibers of puborectalis, pubococcygeus, iliococcygeus and ischicoccygeus) is a physiological process which is essential to allow the passage of fetus during vaginal delivery. Levator hiatus one of the common hernial site in women due to macrotrauma and microtrauma i.e. levator overstretching during labor. Vaginal delivery is also associated with injuries to anal sphincter. These injuries mostly remain undiagnosed in labor room and may cause anal incontinence and urgency later in lifeand have an adverse impact on social life of a woman.

Objectives: To evaluate the effect of mode of delivery on levator hiatus biometry and external anal sphincter morphology in pre and post delivery period and to study the influence of clinically unrecognized external anal sphincter injuries on anal continence.

Study Design: 74 women were enrolled in this prospective observational study after written and informed consent and meeting the eligibility criteria through both outpatient and inpatient department of Institute of obstetrics and gynecology at Sir Gangaram Hospital, Delhi between 34-40 weeks of pregnancy.

Methodology and Data Collection: The purpose of the study was explained to the women in a language best understood by them. Women were subjected to 3-D transperineal ultrasound at 34-40 weeks of gestation and external anal sphincter morphology was assessed by endoanal ultrasound. Integrity of bowel continence was assessed by Jorge and Wexner questionnaire. Enrolled women were divided into 3 groups in post-delivery period **(group A: who had vaginal delivery, group B: who had elective LSCS and group C: who had emergency LSCS).**

Post- delivery levator hiatus was assessed at postpartum day3/day4. Endoanal ultrasound was also done at day3/day 4 postpartum. Jorge- Wexner Questionnaire was again repeated at day3/ day4 postpartum which was further repeated after 6 weeks of delivery and some women were asked similar questions after 8-10 months of delivery.

Postpartum changes in levator hiatal biometry were correlated with various parameters of labor.

Data Analysis: Statistical testing was conducted with the statistical package for the social science system version SPSS 17.0 along with MS Excel 2010.

The comparison of normally distributed continuous variables between two groups was performed using student's t test or Mann Whitney U test for nonnormally distributed data.

Nominal categorical data between the groups was compared using Chi-squaredtest, levene's test for equality of variances and ANOVA. Correlation and logistic regression analysis was also done to study the relationship for prediction purpose.

For all statistical tests, a p value less than 0.05 was taken to indicate a significant difference.

Results: Pre delivery levator hiatus area at rest for Indian population was less as compared to Caucasian population with asignificant increase in levator hiatus area (cm^2) at rest ingroup A i.e. by around 12.03% and no significant change in group B and C. None of the women reported anal incontinence in pre-delivery period and post- delivery period although one woman had thinned out internal anal sphincter on left anterior region and another woman had disruption of anal sphincter on right anterior region in postdelivery period. However they were not symptomatic as per Jorge-Wexner Questionnaire.

Conclusion: Vaginal delivery is associated with significant increase in levator hiatus area. Adequate perineal support and avoidance of prolonged second stage of labour may prevent obstetric anal sphincter tears.

[BGC0105]

Aprospective Randomized Comparative Clinical Trial of Hysteroscopic Septal Resection Using Conventional Resectoscope Versus Mini-Resectoscope

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Introduction: Septate uterus is the most common congenital uterine anomaly in high risk population. Hysteroscopic septal resection (HSR) is the gold standard treatment for women with septate uterus with recurrent pregnancy loss. Conventional resectoscope (CR) using 9mm working element with 4mm telescope is widely used for HSR. It requires cervical dilatation upto 9 mm. Cervical dilatation may lead complications like cervical lacerations, cervical incompetencewith prolonged dilatation time. Mini-resectoscope (MR) with outer sheath of 5mm using 2.9mm telescope needs cervical dilatation only upto 5mm, thereby reducing the complications and hence intraoperative and postoperative morbidity. Use of mini-resectoscope is advantageous in patients where cervical dilatation is difficult like in cases of cervical stenosis, as it requires lesser dilatation. Very few studies are available in the literature on the use of MR for operative procedures and no study is available comparing conventional with mini-resectoscope for hysteroscopic septal resection.

Objective: This study was planned to determine the feasibility of mini-resectoscope for HSR and to compare it with conventional resectoscope in terms of difficulty in dilatation, operative time, intraoperative complications, postoperative morbidity, menstrual and reproductive outcome.

Material and Methods: This was a prospective randomised controlled trial conducted in the department of Obstetrics & Gynaecology. 40 patients fulfilling the inclusion criteria were recruited and randomised into 2 groups. In Group A (20 patients), hysteroscopic septal resection was done using conventional resectoscope and in group B (20 patients), mini-resectoscope was used. The various parameters recorded were cervical dilatation time, operating time, intraoperative complications, postoperative pain, hospital stay and post-surgery reproductive outcome in both groups.

Results: Data analysis was carried out using SPSS IBM software version 20.0. The mean operating time was comparable but cervical dilatation time was significantly more in group A(3.08±0.62 in group A vs 1.69±0.33 in group B, P <0.001). Duration of hospital stay was significantly less in group B(6.02±0.97 hours in group A vs 4.67±0.63 minutes in group B, p <0.001). There was no difference in adequacy of vision in both the groups but area of field of vision was less in mini-resectoscope group. Four out of nine patients with infertility conceived after surgery. Conception rate was 65% in group A and 70% in group B. There was significant reduction in abortion rate and significant increase in term delivery rate both the groups which was comparable. Two patients in group A had short cervical length (less than 2.5cm) on ultrasound monitoring and underwent cervical cerclage during pregnancy and none of the patients in group B required cerclage.

Conclusion: The present study showed that hysteroscopic metroplasty with mini-resectoscope has comparable reproductive outcome to conventional resectoscope with lesser cervical dilatation required, shorter cervical dilatation time and significantly reduced hospital stay but field of vision is less and resection time is more, hence more expertise is required. Miniresectoscope is advantageous in patients with difficult cervical dilatation.

[BGC0106]

Spontaneous Ovarian Hyper Stimulation - Mimicking Malignancy

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Introduction: Ovarian hyper-stimulation syndrome with natural ovulatory cycle is extremely rare. The syndrome has been previously reported in rare instances of increased production of human chorionic gonadotropin (hCG) such as multiple pregnancies, hydatidiform mole, polycystic ovary disease and elevated concentrations of thyroid-stimulating hormone (TSH) in hypothyroidism. High levels of these hormones are able to stimulate by natural promiscuous activation the wild-type FSHr, resulting in sporadic presentations of the syndrome.

Case Description: We present a case of Ovarian hyperstimulation syndrome associated with a spontaneous normal singleton pregnancy in a 35-year-old woman presenting with abdominal distention, dyspepsia and dyspnoea. Ultrasonography revealed 8weeks viable intra-uterine single foetus with bilateral multi-locular cystic ovarian masses and fluid in POD. With a suspicion of ovarian malignancy, a serum CA 125 was advised whichwas 2280 U/ml. Patient was referred to us with an advice to undergo Medical termination of pregnancy. A repeat ultrasound and CA 125 was done at our centre which was 300u/ml. An MRI pelvis was done which showed bilateral enlarged ovaries with multiple cysts with no solid nodules or internal septations.She was finally diagnosed as a case of Spontaneous Ovarian hyper stimulation syndrome and was managed on the same line.

OHSS was managed conservatively and at 37 weeks of gestation, the patient had spontaneous onset labour and underwent an uncomplicated vaginal delivery of femalenew born weighing 3.5kg.

Conclusion: OHSS is a potentially life-threatening complication that can occur sequel to the influence of HCG (whether exogenous or endogenous). Early recognition and appropriate supportive therapy is advocated to ensure a good outcome.

[BGC0107]

Retrospective Analysis of Patients Undergoing Hysterectomy for Abnormal Uterine Bleeding In Aiimsjodhpur: Role of figo's palm–coein classification and histopathological correlation

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Introduction: Abnormal uterine bleeding (AUB) is the commonest menstrual problem during perimenopause. The International Federation of Gynaecology and Obstetrics working

group on menstrual disorders has developed a classification system (PALM–COEIN) for causes of the AUB in non-gravid women. The present study was conducted with the aim to study the two components of this system in clinical practice in general and to establish a clinicopathological correlation of AUB with context of PALM component in particular.

Materials and Methods: The data of 178 patients who underwent hysterectomy for abnormal uterine bleeding between July 2017 to June 2019 at AIIMS Jodhpur was collected from old case records and analysed. The patients were initially worked up in outpatient department with the history and clinical examination, followed by transabdominal or transvaginal ultrasonography depending on the uterine size and the pathology. The patients requiring more detailed picture were advised computed tomography (CT) scan. All the patients were screened for common medical disorders like thyroid disorders, prolactin levels, blood sugar levels. Thereafter an endometrial biopsy and liquid based cytology was done for all the patients to rule out malignancy. Relative contribution of various causes of PALM (structural) and COEIN (functional) components andclinicopathological correlationwas analysed.

Result: PALM and COEIN components contributed almost equally for AUB when assessed clinically. On the other hand, the histological examination revealed significantly more cases of PALM (structural or anatomical) component of AUB, i.e. 17.2% versus 82.8 %. The difference was mainly attributed to the detection of more cases of AUB-L (leiomyoma) in highly significant proportions and coexistent cases of AUB-A. AUB-L was the commonest (41.1 %) aetiology overall.

Conclusion: The PALM–COEIN classification system should take into account both the clinical and histopathological diagnoses in women having AUB. It is concluded that the most common cause of AUB is leiomyoma and the most common age group undergoing hysterectomy is the 4th decade while the second commonest is AUB-M. Although the medical treatment options are there, but the patients in premenopausal age require hysterectomy who do not benefit with medical regimens.

Keywords: Hysterectomy, Abnormal uterine bleedingPALM–COEIN, Histopathology

[BGC0108]

A Rare Presentation of Transverse Vaginal Septum as Acute Abdomen Secondary to Ruptured Hematocolpos

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Introduction: Transverse vaginal septum is a rare cause of cryptomenorrhoea resulting in hematocolpos that generally presents as cyclical abdominal pain and mass in adolescent females. We describe here one of the rarest complications of a large hematocolpos compressing bilateral ureters and rupturing spontaneously into the abdominal cavity.

Case Report: A fourteen-year-old girl with primary amenorrhea and cryptomenorrhoea was being worked up for examination under anaesthesia when she started complaining of acute abdominal pain, distension and multiple episodes of diarrhoea and vomiting. On examination, signs of peritonitis were evident. Radiological studies were suggestive of gross hemoperitoneum, marked bilateral hydroureteronephrosis and early intestinal obstruction. Serum creatinine was markedly deranged. The patient was taken up for emergency laparotomy, the transverse vaginal septum was resected, a neovagina was created using an abdominoperineal approach and two rents in posterior vaginal wall draining the hematometrocolpos were closed.

Conclusion: Careful evaluation, planning and timely management of such cases are important to prevent complications.

[BGC0109]

To Determine Role of Metformin Versus Metformin Plus Myoinositol and D- Chiro-Inositol in Adolescent PCOS

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Introduction: Insulin resistance plays a pivotal role in etiopathogenesis of PCOS. To prevent long term health consequences of PCOS, besides life style modifications, use of insulin sensitizers has been proposed. Recently, inositols-Myoinositol (MI) and D-chiro-inositol (DCI) – have shown to be an efficient and safe alternative in PCOS management.

Objective: To compare clinical, metabolic and hormonal effects of Metformin versus combined therapy of metformin and MI and DCI in adolescent PCOS patients.

Methods: This trial was conducted in Gynae OPD at AIIMS, Rishikesh from January 2017 till September 2018. Patients with PCOS, aging 15-19 years, were randomized into two groups, 20 in group I and 21 in group II. Group 1 received Metformin 500 mg BD for 6 months & Group 2 received metformin 500 mg BD along with Myo-inositol 550 mg + D-chiro-inositol 150 mg BD for 6 months. Their clinical, metabolic and hormonal parameters were compared at baseline and after 6 months of therapy.

Results: Baseline characteristics were similar in two groups. After receiving treatment for 6 months statistically significant improvement was seen in Group 2 in comparison to group 1 in their global acne score (p=0.0041), mFG score (p=0.0069), BMI (p=0.0346), hip circumference (0.0151), total cholesterol (p=0.031), post prandial (PP) blood sugar (p=0.0464) and PP insulin (p=0.0153).However, there was no improvement in waist: hip ratio, LH, FSH, LH: FSH ratio, testosterone, DHEAS, fasting blood sugar, fasting insulin, LDL, HDL and triglycerides.

Conclusion: Combined therapy of metformin and MI+ DCI may have a promising role in adolescent PCOS patients as compared to metformin alone.

[BGC0110]

Robotic Assisted Hysterectomy for Benign Indications of Uteri Less Than 14 Week Size Versus More Than 14 Weeks Size: A comparative study

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Introduction: More than 50% of hysterectomies are being performed via abdominal approach currently, but gradually the trend is shifting towards minimally invasive surgeryas it offers the advantage of lesser blood loss, less pain, faster recovery, shorter hospital stay and reduced patient morbidity[3,4]. In 2005, FDA approved da Vinci® Surgical System for robotic gynaecological surgeries and since then its use has increased in both benign and malignant Gynae-oncological surgeries. With Robotic approach gaining acceptance for hysterectomy, several difficulties faced during laparoscopic approach have been overcome. Benefits of robotic surgery parallel those of laparoscopic surgery[5]. However, the advantages offered by robotic assisted surgery include seven degrees of movement along with elimination of hand tremors, endo-wrist movements, flexible movements thereby eliminating fulcrum effect of laparoscopy, stable camera, clear surgical three-dimensional stereoscopic view of operating field and increased independence to the operating surgeon with a shorter learning curve

Objective: The objective of this study was to evaluate the feasibility of robotic hysterectomy for benign indications in patients with small size (<14 weeks) versus large size (>14 weeks) uterus.

Methods: This prospective study was performed from August 2018 to January 2020 in the Department of Obstetrics & Gynecology at All India Institute of Medical Sciences, Rishikesh (Uttarakhand). Surgical outcomes of 216 patient who underwent robotic hysterectomy in our institution for benign indications was analysed. Patients were divided into two groups according to size of uterus less than 14 weeks size versus more than equal to 14 weeks size. Data collected in both groups included intra-operative and post-operative parameters, length of hospital stay and morbidity if any.

Results: Demographic variables were comparable in both groups. Mean estimated blood loss was 180.78 ±68.0 ml (range, 10-340ml) in group 1 and 253.49 ±57ml (range, 60-360 ml) in group 2 (p value < 0.0001). However, the fall in haemoglobin level after 24 hours of surgery was not statistically significantly different in between two groups. Total surgery time in group 1 was 97.86 ± 12.0 minutes (range, 78-132 minutes) and in group 2 was 116.60 ± 15.4 minutes (range, 97-156 minutes), difference being statically significant (p value < 0.0001, 95% CI 103±2.1). Console time in group1 was 43.84 ±6.0 minutes (range,34-57 minutes) and in group 2 53.22 ±5.5 minutes (range,44-66 minutes), difference being statistically significant (p value <0.0001, 95% CI 46.57±0.97). Intra-operative and post-operative complications were not significantly different between two groups.

Conclusions: Operating time and estimated blood loss had a relationship with increasing size of uterus but complication rate, hospital stay and requirement of post op analgesia was comparable in both the groups. Robotic surgery in larger uterus is a feasible option in terms of better surgical outcome and postoperative course. Thus Robotic hysterectomy in women with large uterus is a suitable approach in the narrow region of the pelvis.

[BGC0111]

Prevalence of Clinical Features in PCOS Patients in An Urban Population

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Introduction: Polycystic Ovarian Syndrome (PCOS) is defined as heterogeneous endocrine disorder which is commonly seen in 5-10% of females in reproductive age group. Almost one third of them are younger than 36 years. They often present with variety of symptoms most commonly menstrual irregularity likely oligoamenorrhea, cutaneous manifestations of hyperandrogenism like hirsutism, adolescent acne and alopecia and weight gain.

Objective: To study the prevalence of clinical features in PCOS patients in an urban population.

Methods: One hundred and thirty one females of age group 18-40 yrs diagnosed with PCOS were enrolled. History including menstrual, personal, medical and examination including clinical and physical were done. On the basis of age, 4 groups were made and prevalences were calculated for each finding in that particular age groups.

Results: Age group 18-25yrs showed maximum numbers of patient of PCOS with high prevalence of menstrual irregularities (95.6%, p=0.019), dysmenorrhea (57.8%, p=0.028), acne (75.6%, p=0). Age group 35-40yrs showed maximum score of Modified Ferriman-Gallway scoring system with highest score in chest hairs (30%, p=0.012). BMI was found to be significantly high (mean 27.27±4.28) in the age group 26-30yrs. Other features like weight gain, hairfall, acanthosis nigricans, waist circumference etc showed even distribution among all age groups.

Conclusions: Patients with PCOS in the age group of 18-25yrs are associated with maximum diversity of symptoms hence diagnosis in adolescents is particularly challenging given the particular age and developmental issues in this group.

[BGC0112]

Challenges and Outcome of Intrauterine Adhesions: Retrospective analysis of 8 years

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Background: Intrauterine adhesion is the condition that occurs when scar tissue is formed inside the uterus and or cervix. It leads to variable degree of scarring and causes menstrual disturbances, infertility, and relatively rare placental abnormalities like Placenta accreta and previa. It is frequently

encountered but least understood condition, Despite the wide use of diagnostic and Operative Hysteroscopy, the management of Intrauterine adhesion is still challenging.

Aim: To Analyse the Etiologies, clinical features, diagnostic modalities used and the therapeutic outcome following Hysteroscopic adhesiolysis among women with intrauterine adhesions, managed during past 8 years.

Material and Methods: A Retrospective Cross sectional Study of 8years was conducted and those Women who had undergone Hysteroscopic adhesiolysis for intrauterine adhesions were selected. Case records of these women were retrieved from Medical Record Department. Sociodemographic, clinical, Obstetric profile, Hysteroscopic findings, details of adhesiolysis, postadhesiolysis treatment, changes in menstrual pattern & Fertility outcomes were recorded.

Results: The leading cause for intrauterine adhesions was D&C (62%) and followed by Tuberculosis (19%). TVS assessment of Endometrial thickness was 64% diagnostic for moderate Adhesions, thin ET with few echogenic shadows & Doppler flow is impaired *and* irregular, echogenic ET (<2 mm) with High resistance doppler flow is diagnostic for severe Adhesions in 87.5%($p<0.001$). Preoperative ultrasonographically assessed myometrial thickness guided the amount of adhesiolysis & none of our women required laparoscopic assisted hysteroscopic adhesiolysis. Repeat Second look Hysteroscopies carried good results,100% adequate cavity and menses restoration occurred after second look Hysteroscopies. Conception rate was 38% & term Pregnancy rate was 67%, majority of conception occurred in mild adhesion group. Obstetric complications can occur following adhesiolysis. Role of Intrauterine devices vs Foleys and hormones vs hormones with platlet rich plasma infiltrations were equally efficacious.

Conclusion: skilled Hysteroscopy,proper patient selection and relook hysteroscopy are the key standards for the management of Intrauterine adhesions.

[BGC0113]

Rudimentary Horn - Miseries of Misdiagnosis- A case series

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Unicornuate Uterus with non communicating Rudimentary Horn is a rare uterine anomaly. The reported Incidence in literature is 1 in 1 lakh cases. The usual presentation is often asymptomatic but they can have catastrophic sequelae and long-term morbidity if not diagnosed on time or remain unattended. Here we discussed, a case series of 3 cases with varied clinical presentation of noncommunicating rudimentary horn. All of them had undergone a primary surgery wherein rudimentary horn was either unattended or undiagnosed and later on, they had to suffer with grave consequences or long-term morbidities due to complications related to non communicating rudimentary horn. All had to undergo repeat surgery for definitive management

Case 1: 32 yr old lady P2L1A1, presented to gynecology OPD with severe secondary dysmenorrhoea which was not relieved with medical treatment. She had full-term LSCS in her first pregnancy done for breech presentation, which was uneventful. The second pregnancy resulted in spontaneous first-trimester abortion. In her third conception, she had laparotomy for a ruptured uterus at 34 weeks period of gestation with rupture and delivery of a stillborn baby at a government Hospital. After third pregnancy, she started having intractable secondary dysmenorrhea. MRI was done which showed the possibility of a rudimentary horn. The patient underwent laparotomy, non-communicating rudimentary horn was identified on the left side and was excised and the patient became symptom-free thereafter and later had successful full term pregnancy

Case 2: A 23 yr old lady, G2E1 presented to emergency with ruptured rudimentary horn pregnancy with a unicornuate uterus and underwent laparotomy with rudimentary horn excision and right salpingectomy. Both the tubes were found to be normal intraoperatively. She gave a history of laparotomy for ectopic pregnancy at a private hospital 1 yr back for which no papers were available and the condition was not diagnosed. She subsequently had rudimentary horn pregnancy, which ruptured and she had to undergo laparotomy with rudimentary horn excision

Case 3: A 27-year-old lady P2L2A1 presented with complaints of severe intractable secondary dysmenorrhoea for 2 years. She had a history of MTP followed by IUD vaginal delivery of the anencephalic fetus. It was followed by full-term LSCS for breech presentation in her third pregnancy. A provisional diagnosis of endometriosis/rudimentary horn was made. MRI confirmed the diagnosis of a rudimentary horn. The patient underwent corrective surgery and was cured of her symptoms

Discussion: A unicornuate uterus with a rudimentary horn is the rarest variety of type 2 Mullerian anomalies, with a frequency of 1 in 1 lakh cases. Most of these women with rudimentary horn are asymptomatic till menarche or first pregnancy or present with dysmenorrhoea immediately after menarche or in the reproductive age group with secondary dysmenorrhoea and /or chronic pelvic pain. It can also lead to obstetric complications like habitual abortions, preterm labor, and malpresentation, rupture uterus in case of pregnancy in horn. Early diagnosis is important to avoid consecutive damage to the reproductive system, life-threatening complications like a rupture in pregnant state or long-term morbidity in terms of debilitating pelvic pain. All three patients had undergone previous primary surgery where the anomaly could not be diagnosed and these patients had to undergo repeat surgery which could have been easily avoided.

Conclusion: It should be a routine for gynecologist and surgeon to look for normal anatomy of the uterus and position of uterine appendages, insertion of round ligaments in any pelvic surgery, and common operations like caesarean sections. Index of suspicion should be high for timely detection and intervention, to avoid future morbidity and life-threatening complications.

[BGC0114]

Correlation of Severity of Menopausal Symptoms with Serum Estradiol Level

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Objective: Menopausal symptoms negatively affect quality of life of postmenopausal women. This study was an attempt to correlate severity of menopausal symptoms with Estradiol level,

using MRS questionnaire. This can provea valuable adjunct in case of treating menopausal symptoms severity & analyzing improvement of symptoms after HRT (as directly can be done by Menopausal rating scale questionnaire).

Methods: A cross sectional studywas conducted at DR RML Hospital Delhi in the year 2019.400 postmenopausal women who attained natural menopause (cessation of menses more than 1 year) were recruited in the study. Surgical menopause &thoseon HRTwere excluded.Sample collected by venipuncture in plain tube which was then centrifuged at 4500 revolutions per minute for 5 minutes to obtain clear serum. Serum Estradiol was measured with the help of Chemiluminescence Immunodiagnostic system using VITROS ECi/ECiQ, using the VITROS Estradiol Reagent Pack & the VITROS Estradiol calibrators .Severity of menopausal symptoms was done by using MRS questionnaire, which was in bilingual language (Hindi & English).

Results: Mean age of menopause was found to be 47.2 ±3.96 years. Somatic symptoms were found maximum out of all 3 Subscales in study population. In it incidence of joint & muscular pain (67.25%) were highest followed by Insomnia(65.25%) , hot flushes(53.5%), cardiac problems (34.5%). Somatic symptoms were followed by Psychologicalsymptoms - Physical &mental exhaustion in 63.75% Depressive mood in 55.25%, Irritability in 50.5%, Anxiety in 19.25% population.Genito-Urinary symptoms-Vaginal dryness in 59.5%, sexual problems in 42.25 %, bladder problems in 39.75%. population. Psychological subscale has the strongest correlation with serum estradiol level compared to other two subscales (Somatic & Genito-Urinary subscale).

Conclusion: The inverse correlation of serum Estradiol value with total MRS Score is of statistical significance . MRS questionnaire in patients own language can substitute and prove to be a valuable adjunct to serum estradiol estimation for assessment of need of treatment and response in menopausal patients.

Keywords: MRS Menopausal rating scale, Somatic, psychological & Genito-urinary subscales.

[BGC0215]

Adnexal Masses Inpregnancy: A case series

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Introduction: Adnexal masses with pregnancy is a rare finding. Adnexal masses are discovered incidentallyin 1 per 76 to 1 per 2328 pregnancies. With increased useof ultrasound and MRIthe rate of detectionof adnexal masses during pregnancy has increased. Functional cysts of ovaryand luteomas are themost common ovarian massesencountered during pregnancy followed by benign cystic teratomas, serous cystadenoma, para ovariancyst, mucinous cystadenoma andendometrioma.

Materials and Methods: We prospectively analysed allcases with adnexal masses detected during pregnancy indepartment of Obstetrics and gynaecology, AIIMS Rishikesh from January 2019 to August 2020. Women withcysts that spontaneously resolved by 12 weeks gestationwere excluded. During the studyperiod there were 6 such cases with persistent adnexal masses in pregnancy.

Results & Discussion: Among the 6 cases, 3 were diagnosed in1st trimester of pregnancy, 2 were diagnosed in 3rd trimester and 1 wasfound incidentally during caesarean section. In three ofthe cases (case 1 & 2 & 6), salpingo oophorectomy was done. For other cases (case 3, 4) cystectomy was performed. All the six cases had a unilateral cyst. Out of 6 cases, 2 required premature termination of pregnancy. There wasno perinatal mortality but 1 baby had NICU admission due to prematurity for observation.

Conclusion: Ultrasound, MRI and tumor markers have to be considered in any patientwith adnexal mass detected during pregnancy in order to exclude malignancy andfor judicious management.Any adnexal mass found incidentally during caesarean section must be removed. If anysuspicion of malignancy, frozen section should be done and further surgery to beplanned accordingly.

Case 6: Unilocular ovarian cyst and ultrasound showing adnexal cyst

[BGC0316]

Comparative Study of The Effectiveness of Two Different Dosage of Sublingual Misoprostal for Cervical Ripening Before Hysteroscopy

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Background: Hysteroscopy is a minimally invasive approach for evaluating uterine cavity, and has become an indispensable diagnostic and therapeutic procedure. The main limiting factor while performing hysteroscopy is the level of pain or discomfort encountered during the procedure. The pain is attributed to the difficulty in entering the internal cervical os with the hysteroscope. It could be reduced if cervix is ripened before the procedure. The purpose of this prospective observational study is to compare the effectiveness, adverse effects and surgery-related complications associated with two different doses of sublingual Misoprostol (100 and 200 µg) given 2-4 hrs. before hysteroscopy.

Methods: A randomised comparative study was conducted in the department of Obstetrics and Gynaecology of ABVIMS and Dr. RML hospital New Delhi, from 1st November, 2018 to 31st March, 2020. 120 women, fulfilling inclusion criteria were subjected to hysteroscopy. The study subjects received either 100 µg (Group I) or 200 µg (Group II) of sublingual Misoprostol 2-4 hrs. prior to hysteroscopy. The primary outcome of the study was cervical dilatation as measured by the largest number of Hegar dilator that could be inserted without resistance at the beginning of procedure. The largest dilator that negotiated cervical canal without resistance was recorded as the baseline cervical width. The secondary outcomes were subjective assessment of the surgeon of the ease of dilatation of cervix and adverse effect of drug.

Results: The mean baseline cervical width as measured by first Hegar dilator to pass the cervical canal without resistance was 6.6 ±0.62 mm in group I and 6.94±1.21 mm in group II respectively (p value =0.016). Adverse effects like vaginal bleeding, shivering was more in group II compared to group I. No statistically significant difference was found between group I and II with regards to visual analog score.

Conclusions: 100 µg Misoprostol can be used for cervical ripening prior to hysteroscopy with minimal adverse effects.

Keywords: Hysteroscopy, Misoprostol, Cervical width.

[BGC0317]

Effectiveness of Dienogest in Young Women in Relieving Symptoms of Endometriosis

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Introduction: Endometriosis associated pelvic pain (EAPP) is the most common complaint of patients with endometriosis. Nearly, 70% of females with endometriosis present with EAPP (endometriosis associated pelvic pain) while endometriomas are found in 17-44% of patients.

Material and Methods: In this study "Effectiveness of Dienogest in endometriosis in young females" 56 patients in the age group of 15-35 years with complaints of pain and diagnosed as endometriosis either by imaging studies and/or by laparoscopy were given Dienogest 2 mg OD and effect of treatment was seen as resolution of pain over a period of 3 months. The effect of Dienogest was also seen on size of endometrioma. Patients were followed up at 1 and 3 months.

Results & Discussion: Out of 56 patients, 38 (67.8%) patients reported their pain relief within 2-5 days after starting Dienogest. Out of 41 patients (73%) who had severe pain at enrollment, only 1 patient (1.79%) complained of severe pain at the end of 1 month with Dienogest. Successful reduction in endometriotic cyst size (>50%) was seen in 3 patients (5.3%) at the end of 1 month with Dienogest. Out of 56 patients, 41 patients (73.2%) had significant pain relief (>30%) at three months of treatment. At the end of 3 months, 7 patients (12.5%) had significant cyst size reduction (>50%) with Dienogest. No major side effects were noted.

Conclusion: Dienogest is well tolerated drug for endometriosis showing significant relief of pain. However it was seen that though endometriomas did not grow during treatment, significant regression was uncommon.

Keywords: Endometriosis in young women, Dienogest, pelvic pain, cyst regression

[BGC0318]

Levonorgestrel Intrauterine System in Heavy Menstrual Bleeding Due to Benign Conditions

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Introduction: The study aims to assess the efficacy of LNG IUS (Levonorgestrel Intrauterine System) in the treatment of Heavy Menstrual Bleeding (HMB) due to benign causes such as adenomyosis, fibroid uterus, endometrial hyperplasia without atypia and to assess patient's satisfaction with LNG IUS.

Materials and Methods: In this prospective observational study, 38 women in the age group between 33-60 years with HMB due to benign causes were recruited. LNG IUS was inserted in the postmenstrual period and follow up was done at 3 months and 6 months by clinical and USG evaluation. The reduction in bleeding was analyzed by change in bleeding pattern and evaluation of PBAC (pictorial blood loss assessment chart) maintained by the patient.

Results: After 3 months of LNG IUS insertion, 89.1% had a significant reduction in menstrual blood flow which further improved to 100% by the end of 6 months. The mean PBAC score was significantly reduced to 56.6±61.5 and 36.1±30.5 at 3 months and 6 months respectively as compared to 339.6±152.5 at recruitment ($p<0.001$). There was a significant reduction in dysmenorrhoea at 3 months (47.3% vs 27.0%; $p<0.02$) and at 6 months (47.35 vs 5.5%, $p<0.001$). There was a significant reduction in Endometrial thickness (ET) at 6 months (8.05mm vs 5.41mm; $p<0.01$). 66.6% regression rate of endometrial hyperplasia was seen. Majority of patients were either "very satisfied" or "satisfied" with the treatment with 100% satisfaction rate. No major side effects were observed.

Conclusion: LNG IUS is an effective, safe, and acceptable method of treatment of Heavy Menstrual Bleeding due to benign causes, with excellent patient satisfaction.

[BGC0319]

Detection of Occult Anal Sphincter Injuries in Primipara by 2D Transperineal Ultrasound and Its Clinical Correlation

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Introduction: Anal sphincter injury during childbirth is a leading cause of anal incontinence which incorporates a wide range of symptoms including perineal pain, flatal or fecal incontinence, passive soiling etc. Obstetric Anal Sphincter Injury Syndrome (OASIS) includes 3rd and 4th degree perineal tears. Anal sphincter damage that is not apparent on routine clinical examination is referred to as occult injury. These deeper sphincter injuries could be responsible for new onset or residual bowel symptoms and can only be diagnosed by imaging studies, which have shown the prevalence of occult tears to be as high as 35-41%.

Objective: To study the incidence, risk factors and clinical outcome of occult anal sphincter injury using 2D transperineal ultrasound in primipara.

Methods: Low risk primigravida at or more than 36 weeks were recruited from outpatient department. They underwent baseline 2D transperineal ultrasound (TPU) of the anal sphincter complex antenatally and it was repeated on day 2 postpartum. The difference between the pre and post-delivery measurements was used to detect occult anal sphincter injury (OASI). Group I (n=91) included subjects with OASI (diagnosed as thinning of internal and external anal sphincter, interruption in anal sphincter, alteration in mucosa and half-moon sign) and group II (n=109) included those who had no OASI. A repeat 2D TPU was done at 2 weeks and 6 weeks postpartum to follow-up sphincter injury and various clinical tests were applied at 6 weeks to assess the clinical outcomes of sphincter injury.

Results: In our study the incidence of occult anal sphincter was 44.5%. Overall, the mean antenatal thickness of external anal sphincter (EAS) was least at 12o'clock position and of internal anal sphincter (IAS) was least at 6'o clock position. Baseline antenatal thickness of both EAS and IAS was already less in cases as compared to controls. Significant risk factors for OASI were position of baby (p=0.028), duration of second stage of labor (p<0.001), greater length of episiotomy (p<0.001), angle of episiotomy (p<0.001)) and baby weight (p=0.042). At six weeks post-partum, pelvic floor examination revealed weak levator muscle tone in 30% cases as compared to 2.75% controls (p<0.001). Normal resting tone of anal sphincter was observed in 89% subjects in group I and 98% subjects in group II (p=0.013); normal squeeze score was present in 81.3% subjects in group I and 96.3% subjects in group II (p=0.008). Thus, OASI was associated with reduced anal sphincter tone in cases when compared to controls. The symptoms more often experienced by cases were sense of incomplete evacuation, pressure in lower abdomen and rarely incontinence to loose stool.

Conclusion: In our study the incidence of OASI was high. The technique of 2D Transperineal ultrasound is simple, easily available and feasible to detect OASI. Majority of gynaecologists are already using transperineal probe to perform ultrasounds. Evaluation of anal sphincter in post- partum period is possible with the same probe. Patients who sustain OASI can be followed up in perineal clinic more meticulously for pelvic floor rehabilitation.

[BGC0320]

Association of HOXA13 Gene Expression Among Premenopausal Women with Pelvic Organ Prolapse: A cross-sectional study

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Introducion: Pelvic organ prolapse (POP) being a multifactorial disease occurs due to loss of support which is maintained by complex interaction between levator ani, vagina, and its connective tissue that includes extracellular matrix. Changes in collagen metabolism leads to loss of vaginal wall resistance resulting in loss of support and pelvic organ prolapse. The extracellular matrix is regulated by Homeobox genes. HOXA13 gene (a member of homeobox genes) is a key regulator of extracellular matrix in upper vagina. Its altered expression in vaginal tissue may contribute to molecular mechanisms of POP.

Objective: To estimate and compare HOXA13 gene expression in vaginal wall tissue in Premenopausal women with POP to those without POP.

Methods: A cross-sectional study was conducted on a total of 60 premenopausal women. Women with any malignancy, history of steroid intake or pelvic surgeries, collagen disorders and BMI ≥30 kg/m2 were excluded. Those with ≥ stage II POP undergoing a surgical procedure for POP were enrolled under case group while women with other benign gynecological conditions undergoing hysterectomy (any route) for the same were enrolled under control group. HOXA13 gene expression analysis was done by obtaining around 0.5 x 0.5cm tissue sample from upper part and anterior vaginal wall of enrolled patients during the surgical procedures using Real Time Quantitative PCR (qRT PCR). Fold change of HOXA13 gene was calculated and compared with respect to 30 women without POP. Quantitative variables were analyzed using independent t test/Mann-Whitney test between the two groups and ANOVA/Kruskal Wallis test between more than two groups. Qualitative variables were compared using Chi-Square test/Fisher's Exact test.

Results: Majority (60%) of the cases had Stage III-C prolapse, 10% were observed with stage II-C prolapse, 6.67% had stage IV prolapse and stage III-Bp was seen in only 3.33% of the subjects. HOXA13 gene was observed 1.21-fold downregulated in women with POP. However, It was not found statistically significant (p=0.38). Downregulation of HOXA13 gene was elicited in stage III and stage IV prolapse and its association with the severity of prolapse was observed statistically significant (p=0.007). HOXA13 gene was found downregulated in most (84.21%) of the females above 40 years which was also statistically significant (p=0.01). The cut off value for HOXA13 gene expression analysis in POP patients was 5.81 (in terms of HOXA13 delta ct). The sensitivity, specificity, PPV and NPV of HOXA13 gene expression analysis in POP women (>5.81) were 0.96, 0.16, 0.53 and 0.83 respectively. HOXA13 gene expression analysis as diagnostic test for women with POP was 56.67%.

Conclusion: Diminished expression of HOXA13 gene was seen in majority of the women with POP, though not statistically significant. It was elicited in advanced stages (stage III and stage IV) of POP which was statistically significant. The reduced expression was also significantly observed in older women (age >40 years) with POP. Thus, HOXA13 gene expression analysis can be used as a screening tool in young population to predict the risk and severity of having POP. This will eventually reduce the socioeconomic and financial burden worldwide.

[BGC0321]

A Prospective Study on Effect of Episiotomy and Perineal Tears on Pelvic Floor Anatomy and Function at Six Months Postpartum

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Introduction: Pregnancy and childbirth lead to some degree of perineal trauma either due to spontaneous tear of perineal tissue or episiotomy. Perineal injuries especially the extensive ones can lead to short term problems and discomfort, such as bleeding, pain or infection on the other hand long term effects are manifested in the form of pelvic organ prolapse, urinary incontinence, anal incontinence or sexual dysfunction. Episiotomy was introduced to reduce the pelvic floor injury; however, its beneficial role has not been completely established with regard to prevention of urinary and anal incontinence and genital prolapse when compared with spontaneous perineal tears.

Objective: To determine and compare the effect of episiotomy and perineal tears on pelvic floor anatomy and function at six months postpartum.

Materials and Methods: In this prospective cohort study, nulliparous women were recruited during antenatal period at

28 to 36 weeks of period of gestation and assessed for pelvic floor anatomy, pelvic floor muscle strength and pelvic floor dysfunction symptoms by means of clinical examination, perineometer and standard questionnaires. They were followed up at their deliveries when labour characteristics including the type and degree of perineal trauma were recorded; and then at six months postpartum when a repeat assessment of pelvic floor anatomy, pelvic floor muscle strength and pelvic floor dysfunction symptoms was done. The subjects were grouped into various trauma groups based on the degree of tear sustained and antenatal and six-month follow up data were compared among the various trauma groups.

Results: Out of 170 women who delivered vaginally 163 women could be followed up till 6 months postpartum. 20 (12.27%) delivered without any episiotomy or perineal tear, 90 (55.21%) received a mediolateral episiotomy, 22 (13.50%) had 1st degree tear, 17 (10.43%) had 2nd degree tear, 10 (6.13%) had 3A and 4 (2.45%) had 3B degree of tear. At six-month postpartum, pelvic floor anatomy worsened in proportion to the degree of trauma sustained. Vaginal squeeze pressure was found to be lowest in major tears (23+13.28 cm of H_2O) and highest among the intact perineum group (32.02+12.42 cm of H_2O) (p value=0.047). No significant correlation could be found between degree of perineal tear and urinary and anal incontinence. Forceps delivery was found to be associated with an increased likelihood of major tears (p value < 0.035). Overall sexual function scores did not differ significantly among the various trauma groups at six-months follow up, but the maximum deterioration in sexual function when compared with baseline, was found in major tear group. The decline in sexual function was mainly attributable to dyspareunia which remained significant among all the tear groups at six months postpartum.

Conclusions: Mediolateral episiotomy leads to minimal deterioration of pelvic floor anatomy and function six months postpartum while intact perineum or minor lacerations are the most desirable outcomes of vaginal delivery. Major perineal tears have most detrimental effects on pelvic floor anatomy and function. Forceps delivery is associated with major degrees of perineal tears.

Theme: Gynae Oncology

[GO0101]

Colposcopic Evaluation of Symptomatic Cervical Erosion

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Introduction: Cervical cancer, the second most common cancer affecting women worldwide is particularly responsible for deaths due to cancer in developing countries. Since preinvasive lesions can be detected timely by effective screening procedures in place and the disease has a high latency period for conversion into malignancy, early detection and timely management should be done.

Objective: To study the detection rate of premalignant lesions of cervix in symptomatic women with Cervical Erosion using cytology and colposcopy simultaneously.

Methodology: Simultaneous cytology and colposcopy was done for 80 women with symptomatic cervical erosion followed by a colposcopic directed biopsy in women with MRCI >3. Finally, correlation between cytology, colposcopy and histopathological results was done.

Results: On colposcopy, 65/80 women had MRCI >3 and hence were biopsied. 12/80 women had MRCI>6 and were predicted to be harboring a high grade lesion comparable to 10/80 confirmed to have a high grade lesion on histopathology. 50/80 women had non-specific inflammatory changes on cytology comparable to 52/80 on histopathology, 13/80 had lesser abnormalities like ASCUS and LSIL but only 3/80 had CIN1 on histopathology, 2/80 were HSIL on cytology and 8/80 had CIN2/3 on histopathology, and lastly only 1/80 had SCC on cytology but 2/80 on histopathology. The sensitivity, specificity, PPV and NPV of cytology and colposcopy for diagnosing cervical dysplasia was 46.1%, 83.5%, 35.2%, 88.8% and 84.6%, 86.5%, 55%, 96.6% respectively making colposcopy a better screening tool than cytology for evaluating cervical malignancy.

Conclusion: All women with symptomatic cervical erosion should be thoroughly evaluated and cytology alone cannot rule out underlying high grade lesion. Colposcopic examination should ideally be carried out in symptomatic cervical erosion and colposcopic directed biopsy should be done to exclude malignancy to ensure early detection and timely management.

[GO0102]

Incidental Diagnosis of Gonadoblastoma in Swyer syndrome

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Introduction: Swyer syndrome is a disorder of sexual differentiation with an incidence of 1 in 80,000 population. Dysgenetic gonads have a propensity for malignant transformation particularly in the presence of Y chromosome and hence need prophylactic removal.

Case: We report a case of an 18-year-old girl who presented with complains of not having attained menarche and absent development of breasts. There was no history of similar complains in any other family member. On examination Breasts were poorly developed (Tanner stage 1). Axillary hairs were sparse and pubic hair was Tanner stage 2. Examination of the external genitalia revealed no ambiguity. Labial folds, clitoris and vaginal canal were well developed. On digital rectal examination uterus was palpable. On further evaluation she found to have raised gonadotropins. Serum Follicular stimulating hormone level was 13.7 IU/L (normal range: 2-12 IU/L) and serum Luteinizing hormone level was 45.2 IU/L (normal range: 2-9 IU/L). Magnetic Resonance Imaging (MRI) revealed hypo plastic uterus and bilateral gonads were present. Further karyotype analysis detected 46XY genetic makeup. This picture of hyper gonadotropic hypogonadism with a 46XY karyotype helped to pin the diagnosis of Swyer syndrome. The patient was then planned for laparoscopic bilateral gonadectomy due to risk

of malignancy in future. Examination under anesthesia showed a well-developed cervix. On laparoscopy hypo plastic uterus was seen with bilateral streak gonads. Bilateral gonadectomy was done and gonads were retrieved after putting them in in an endo bag. Post-operative period was uneventful and patient was discharged after observation for 24 hours. On histopathological evaluation, presence of gonadoblastoma was detected in one of the gonads with no evidence of malignant transformation. Patient was started on hormonal therapy post surgery. At 1 year of follow up patient is doing well.

Conclusion: Successful management of cases of 46 XY gonadal dysgenesis begins with early diagnosis and prophylactic gonadectomy preferably by minimally invasive techniques. This would prevent development of germ cell neoplasms, which are seen in high probability in dysgenetic gonads. Risk of gonadoblastoma in these cases is as high as 30%, which increases with age and have potential for malignant transformation. Prognosis of patients with Swyer syndrome thus depends on early detection and gonadectomy prior to onset of malignancies.

[GO0103]

Screening of Unhealthy Cervix Using Combination of Papanicolaou Test and Colposcopy

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Introduction: Cervical cancer is the second most common cancer in women world-wide. It can primarily be prevented by HPV vaccination and secondarily by using various methods of screening for early detection of premalignant lesions of cervix and their early management. In tertiary care center use of combination of Pap test and colposcopy in the same sitting especially in cases of unhealthy cervix can yield better sensitivity & specificity for detection of premalignant lesion of the cervix.

Aims and Objectives: To evaluate the efficacy of the combination of Papanicolaou test and Colposcopy in screening of premalignant lesion in unhealthy cervix.

Material & Method: It was a Prospective observational study done in one year duration in dept. Of Obs & gynae LHMC. 80 women with age >21year – 65 years and sexually active with unhealthy cervix attending gynae OPD were enrolled in the study. Detailed examination including Per-speculum examination was done. PAPS smear was taken followed by colposcopy and guided biopsy in the same sitting in patients whom colposcopy was suggestive of abnormal findings by Modified Ried Colposopic index. Further biopsy specimen was subjected to histopathological examination. Correlation of Pap test report, colposcopic diagnosis and hpe reports were evaluated.

Results: Out of 80 cases 31(38.75%) cases were between 41-50 years with mean age 43.2year ± 11.1, 61cases(76.25%) were between 16-20 years of age at marriage, 46 cases(57.5%) were belonged to lower socioeconomic class. Majority of women had PAPS test report showing NIEL 75% followed by ASCUS 10%, LSIL 3.75%, HSIL 3.75%and 7.5% cases had SCC. On colposcopy according to modified reid index 48.75% cases were benign / inflammatory followed by 36.2% of cases low grade lesion and 15 % of cases high grade lesion Among 36.2% cases had low grade lesion on colposcopy (RCI 3-5) out of which 9 cases had LSIL,14 cases had HSIL,1 case had adenocarcinoma and 1 case had SCC on histopathology. Sensitivity, specificity, PPV, NPV and diagnostic accuracy of PAPS test were 38.4%, 87%, 75%, 60%, 63.7% and colposcopywere 71.39%78.05%75.68% 74.42%&75% respectively.

Conclusion: High sensitivity in colposcopy 71.79% as compared to cytology 38.4% and high specificity in cytology 87% as compared to colposcopy 78.05 % emphasizes the need for pairing these methods to achieve better results. When properly used colposcopy complements cytology by accurately defining the most suspicious area of cervix for taking biopsy and there by increases the diagnostic accuracy.

[GO0104]

Correlation of Ovarian Volume And Endometrial Thickness with Histopathology in Postmenopausal Bleeding

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Introduction: Endometrial cancer is the second most common gynecological malignancy in the developing nations. In India the incidence of endometrial cancer is 4.3 per 1,00,000 women. It is well known that the endometrium irrespective of reproductive or menopausal status contains estrogen receptors and responds to circulating estrogen. Postmenopausal ovaries consist largely of stroma, which includes hormone synthesizing cells. Larger ovaries were more likely to contain luteinized cells and hilar cells, overall suggesting a link between size and potential for hormone synthesis. Ovarian stromal hyperplasia and endometrial cancer are often identified concurrently, suggesting that ovarian morphology may represent a marker of cancer risk among older women.

Objective: A prospective observational and analytical study was conducted in which association between average ovarian volume and endometrial pathology was studied in women with postmenopausal bleeding.

Methods: 100 women with a normal PAPS smear were recruited out of 120 women with postmenopausal bleeding. Average ovarian volume and endometrial thickness were measured on transvaginal ultrasound, endometrial sampling was performed and the ultrasound findings were then correlated with the histopathological findings. The cutoff for ovarian volume was kept to be 3.5cc based on a previous study and that for endometrial thickness was kept to be 4mm.

Results: Out of total 100 endometrial biopsy samples, 80% of the histopathology reports were found to be benign lesions and remaining 20% had a malignant pathology. The mean of AOV in Benign group was 3.98cc (1.75), while for Malignant group it was 7.38cc. The mean endometrial thickness for benign group was 5.62, while it was 17.55 for malignant group. There was a significant difference between the two groups in terms of endometrial thickness ($W= 43.50$, $p< 0.001$). Linear regression analysis showed an association between average ovarian volume and premalignant and malignant endometrial

conditions (W = 137.000, p = <0.001). The cutoff of endometrial thickness in present study was calculated to be 8.75mm, it predicts endometrial malignancy with a sensitivity of 100%, and a specificity of 86%. The cutoff of average ovarian volume in present study was calculated to be 5.3cc. At a cutoff of AOV (cc) > 5.32cc, it predicts endometrial biopsy to be malignant with a sensitivity of 90%, and a specificity of 84%. At this cutoff value NPV was 97% and PPV was 58%.

Conclusion: Ovarian volume measurements can be used as an adjunct to endometrial thickness in ruling out endometrial carcinoma in women with postmenopausal bleeding.

[GO0105]

Carcinoma Vulva: A study from Northeast India

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Introduction: Carcinoma vulva is a rare cancer of the female genital tract. It mostly presents in postmenopausal women. The treatment of vulvar cancer is surgery, chemoradiation, radiotherapy or a combination of all modalities. Here we present a study of 33 cases of carcinoma vulva over a period of two years at a Northeast India regional cancer institute describing its demographic features and treatment outcomes.

Objectives: To critically analyze clinical profile, treatment modalities, and survival rates of vulvar cancer in our institute.

Methods: A retrospective cohort study of vulvar cancer at Northeast India regional cancer institute from January 2017 to December 2018.

Results: A total of 33 cases of biopsy proven carcinoma (Ca) vulva were studied. Maximum number of cases belonged to the age group; 60-69 years (39.4%). 66.67% cases had palpable inguinal lymph nodes at presentation and 100% had squamous cell carcinoma on histopathology. Maximum number of cases belonged to stage III (44.8%) and least number of cases belonged to stage IV (10.3%) of FIGO 2009 staging of Ca vulva. 87.9% cases underwent treatment and 12.1% were lost to follow up. Out of the cases who underwent treatment; 55.2% cases were taken up for primary surgery and 44.8% cases for primary radiotherapy. 75% cases who underwent surgery received adjuvant radiotherapy. No complication was seen in patients post-radiation. But, 6.25% patients post-surgery developed lymphocyst and 18.75% patients developed wound necrosis (p>0.05).

Conclusion: Vulvar cancer is not a common malignancy of the female genital tract that presents in sixth and seventh decades of life and often with palpable inguinal lymph nodes. Though early stages of Ca vulva are treated by surgery, the incidence of immediate postoperative complications in our study was more as compared to post-radiotherapy. Also, maximum patients in the present study post-surgery received adjuvant radiotherapy. Thus, radiotherapy can be considered as the primary treatment modality for patients with early as well as advanced vulvar carcinoma.

[GO0106]

PAP Smear Sreening in Antenatal Women

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Introduction: Cervical cancer has a long natural history which provides the opportunity for screening and detecting the changes during the preinvasive phase and therefore, early treatment and cure. The most effective method of screening employed has been cytology based Papanicolaou (Pap) smear, which has contributed considerably to reducing the incidence and mortality from cervical cancer. Cervical cancer is the commonest genital tract malignancy encountered in pregnancy with an estimated incidence of 1 in 1200 to 1 in 10000 pregnancies. Thus, pregnancy provides a unique opportunity to screen women for cervical neoplasia, particularly in developing countries where routine screening is not available to the community at large.

Objectives: To determine the prevalence of abnormal Pap smears in pregnant women and the patient profile of women withabnormal Pap smears.

Methods: This prospective cross-sectional study was conducted within a period of one year from October 2014 to September 2015 on 200 pregnant women presenting in the Out Patient Department (OPD) of the department of Obstetrics and Gynaecology, SMGS Hospital, Jammu. Inclusion criteria were pregnant women less than 28 weeks of gestation and age between 18-45 years. Exclusion criteria included cases who lost follow up, who were not able to be in lithotomy position and cases with abnormal vaginal bleeding. Informed consent was taken and patients were required to fill up a validated questionnaire regarding the risk factors. A Pap smear was performed on the patients and the transformation zone was sampled using the Ayre's spatula and a cotton swab. These slides were sent to the pathology department for Papanicolaou staining and cytology and then further classified according to the Bethesda System. The data was analysed statistically using chi square and t test. The data was considered significant if the p value was less than 0.05.

Results: The number of abnormal smears was 79(39.5%) in this study including inflammation(30.5%), fungal spores(0.5%), trichomonas (1.5%) and metaplasia (7%). No epithelial cell abnormality was seen. The mean age of patients with abnormal smears was 24.85+/- 3.52 years. The statistically significant risk factors for abnormal smears included rural population (p=0.011) and having more than one sexual partner among the patient(p=0.021) and similarly with the husband(p=0.001).

Conclusion: Pregnancy may be the only time a woman presents to the healthcare professional in our country, hence, this opportunity for screening and counselling should not be missed. Also in a developing country like ours where nearly 70% of the population lives in rural areas, which is a risk factor for abnormal smears according to our study, screening the Indian population becomes very important.

[GO0107]

Vaginal Rhabdomyosarcoma in a Patient with Advanced Cervical Cancer

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Aim: To present the diagnosis of a very rare secondary malignancy in a patient with advanced cervical cancer.

Introduction: Rhabdomyosarcoma is a very rare in adults accounting for less than 5% of all soft tissue tumours and less than 1 % of all malignancies. Vagina is one of the least common sites for occurrence of Rhabdomyosarcoma in the genital tract.

Case Description: We present a case of a 53-year-old woman who is a follow up case of cervical cancer stage IIIB, managed by radiotherapy and chemotherapy. She was doing well till 5 years of her treatment for cervical cancer when she presented withcomplaints of pain lower abdomen and discharge per vaginum for 10 days. On examination she was found to have an abdominal mass of 18 weeks size and on local examination there was 4X4 cm fixed mass on lower third of vagina arising from left side. MRI abdomen and pelvis was done. On MRI, upper abdomen was unremarkable, and uterus was bulky with voluminous collection in the endometrial cavity extending upto the cervical canal (? Hematometra) measuring 8.6X10.3X18.9 cm in size, bilateral parametria were maintained. Pyometra drainage Biopsy from the vaginal mass and biopsy from vaginal mass was done. Biopsy report showed features of Rhabdomyosarcoma. Further follow up of the patient was not possible due to lockdown in view of the pandemic. She was last contacted telephonically on 25th March 2020; she said she was waiting for the lockdown to be lifted so that her further management can take place.

Conclusion: It is important to keep our minds open to other differentials apart from the recurrence of primary malignancy, sometimes it can turn out to be a very rare tumour unrelated to the primary tumour as we encountered in our case.

[GO0208]

Surgical Management of Gynae Malignancies in the Times of the Pandemic

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COVID-19 outbreak was declared a 'pandemic' by the World Health Organization. COVID-19 on March 11, 2020. The impact of the COVID-19 pandemic on world healthcare system and economy is unprecedented. Currently routine surgical procedures are at a halt globally, but whether one can delay cancer procedures remains an ethical issue. Cancer cases, due to a state of immunocompromise are more susceptible for COVID-19 infection and thery deteriorate rapidly. Safety of healthcare personnel needs to be ensured at the same time.

There should be limited face to face interaction with the staff and health resources should be prioritized due to limited resources in these times.

Here we are presenting a series of 10 gynae malignancies that were operated on during the pandemic at Sir Ganga Ram Hospital. All of them were managed surgically with the average hospital stay of 3 days and a follow-up appointment in 10 days. The cases included endometrial and ovarian carcinomas.

Due to high susceptibility of cancer patients to severe coronavirus infection, there is increased likelihood of ICU admission and need for mechanical ventilation. Thus, the overall prognosis is poor.

The need for stronger personal protection measures like social distancing, use of personal protective equipment and isolation should be emphasised on. Delay in treatment is known to be an independent risk factor for increased morbidity and mortality due to cancer. A multidisciplinary approach is required with a of gynaecologic oncologist, medical oncologist, radiation oncologist, psycho-oncologist and palliative care specialist. An intensivist should be included in the team for suspected COVID-19 cases. The multimodality treatment needs to be discussed, and an informed written consent should be taken explaining the impact of possible delay, treatment interruptions on disease outcome and also the possibility of rapid deterioration in case they acquire COVID-19 infection during treatment. Teleconsultations should be used for further follow up and length of hospital stay must be minimised in order to decrease the risk of transmission.

[GO0209]

Awareness and Self Care Practices Aboutscreening and Prevention of Cervical Cancer

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Background: Cervical cancer is the second most common cancer among women in India, and fourth most common cancer worldwide. Incidence of cervical cancer is decreasing in developed countries as compared to the developing countries due to regular screening for premalignant cervical lesion and acceptance of cervical cancer vaccines in the developed countries. The high mortality rate from cervical cancer could be reduced through a comprehensive approach that includes community education, social mobilization, effective screening, vaccination, early diagnosis and treatment programmes.

Objective: To assess the awareness of screening and preventive methods of cervical cancer in women.

Method: A cross sectional observational study was conducted on 400 women in ABVIMS and Dr. RML Hospital New Delhi from 1stNovember 2018 – 31stMarch2020. The inclusion criteria include all women between 18 to 45 years of age attending/ visiting/working at Dr. Ram Manohar Lohia Hospital. The exclusion criteria include women already diagnosed and treated for cervical cancer. Data were obtained verbally and recorded in the questionnaire by the same investigator. After recording all answers, unaware participants were given information regarding prevention and screening modalities available in simple language. Readiness to accept screening and preventive methods was noted. Reasons or fears for refusal were also asked and recorded. Complete confidentiality of all the information obtained was maintained.

Results: The majority of women (73.75%) who participated were

in the age group of 20-30 years with mean of 28.54±4.6. Only 25.75% women had heard about cervical cancer, 25.5% knew that HPV is the major cause of cervical cancer. Many of them believed that multiple risk factors were responsible for cervical cancer like multiparity (9.75%), poor hygiene (6.25%), family history (4%), sex at early age (3.25%), multiple sex Partners (2%) etc.25.75% were aware about Pap smear as a screening method for cervical cancer and only 2.50% women had undergoing screening. 25.75% had awareness about the vaccine for cervical and only 7% women had got vaccinated themselves. After counseling 98.50% women were willing to undergo regular screening in future while 1.5% women refusedand reason for refusal was not at high risk in 50% of them and uncomfortable pelvic examination in 50% and all the women were willing to get vaccinated for HPV.

Conclusion: The study found that women had poor knowledge but positive attitude towards the cervical Cancer screening and prevention. An effective strategy needs to be formulated for increasing awareness among the women to get them screened and vaccinated for cervical cancerby use of media, health care programs and active participation of medical professionals will help in spreading awareness about cervical cancer.

Keywords: Cervical cancer, knowledge, attitude, practice

[GO0210]

Factors Predicting Survival Following Recurrence in Women with Advanced Ovarian Cancer Treated with interval Debulking Surgery: A retrospective study

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Background: In accordance with the predominantly late stage at first presentation, ovarian cancer is the most lethal of all pelvic malignancies. High recurrence rates between 60 and 85% within five years are typical for this disease. Clearly, the prognosis for women with recurrent ovarian cancer is poor with a median survival time of less than 2 years.

Aim: To identify clinico pathological factors in predicting survival following advanced ovarian cancer recurrence.treated with Interval debulking surgery.

Method: Consecutive women with recurrence following advanced ovarian cancer treated with neoadjuvant chemotherapy and interval debulking surgery were included. The patients who achieved longer survival after recurrence and those who succumbed to the disease earlier were identified and critically analysed.

Results: There were no significant differences in age, performance status, stage distribution or histology between the two groups. Additionally, no significant difference was observed in progression-free survival after primary therapy. Multivariate analyses revealed the presence of Ascitis before and post NACT, tumor burden post NACT, type of resection at IDS , duration of disease free interval effected the time to recurrence interval and following recurrence the site and number of recurrences sites were the predictors of survival.

Conclusion: This study revealed the risk of recurrence in treated cases of advanced ovarian cancer is presence of ascitis before and after NACT, high tumor burden in the peritoneum and residual disease. Those with early recurrence tend to have recurrence at multiple sites mostly peritoneal. The predictor of Post recurrence survival were the recurrence site at peritoneum. However, late recurrence, solitary sites like vault, Lymph node, distant mets is associated with a favorable survival Hence, recognition of factors in women with advanced ovarian cancer is a way forward for interventions aiming at a prolonged survival

[GO0211]

Analysis of Pelvic Mass in Post-hysterectomy Patients with Unknown Primary Tumor

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Introduction: Pelvic masses following hysterectomy are common findings in gynae-oncology centers. Incomplete pre-operative evaluation, inadequate surgery(sub-total hysterectomy/ only hysterectomy without salpingo-opherectomy in post-menopausal women), delay in histopathological diagnosis are few reasons for missing out on malignant etiologies. The diagnostic dilemma exists because of unknown primary malignancy. This study aims to highlight the various pathologies that present as pelvic masses after hysterectomy and their management based on histopathological examination and Immuno-histochemical markers.

Objective: Aim of the study is to find primary gynecological malignancy in patients with post-hysterectomy pelvic mass.

Methods: Retrospective analysis of all women who presented to BBCI in 1 year duration(January, 2019 to December, 2019) to Gynaecologic Oncology Department of Dr B. Borooah Cancer Institute with history of Hysterectomy done outside for with pelvic mass. The data was collected from the medical records. The data of these women were critically analyzed in regard to their demographic profile, pre-operative and post-operative characteristics, histopathological and Immuno-histochemical markers of pelvic mass, management of the disease and their outcome.

Results: In one year duration, 23 women presented toGynaecologic Oncology Department of Dr B. Borooah Cancer Institute with pelvis masses post-hysterectomy. Age group ranged from 35-50 years. Median time to presentation after hysterectomy was 24 months (range 1month to 60months). Among these 23 patients, primary malignancy was of vaginal/ cervical/endometrial/ ovarian origin. Non- gynecological malignancy was not found in any of these women. Management options of these patients were Concurrent Chemo-radiation/ Palliative Radiotherapy/ Palliative Chemotherapy/ Palliative Care. These represent recurrent cases of the primary disease. The overall survival of these patients was dismal.

Conclusion: Before embarking on any radical procedure such as hysterectomy thorough evaluation should be done for all patients with even minimal symptoms. Early identification of malignant disease can greatly affect the overall prognosis of the patient.

[GO0311]

Colposcopic Evaluation of Cervix in Women with Persistent Inflammatory Pap Smear- An observational cross-Sectional study

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Introduction: Cervical cancer is the most common cancer of the genital tract in women in rural India. Persistent inflammation in the cervical epithelium can many a times lead to increased cellular turnover leading to increased risk of high grade cervical lesions and malignancies. Early detection and timely treatment of such lesions can help in reducing the incidence and mortality due to cervical cancer in the general population.

Objective: To do a colposcopic assessment of cervix in women with persistent inflammatory Pap smear for timely detection and management of cervical epithelial cell abnormalities.

Method: A cross-sectional observational study was done in 50 women with persistent inflammatory Pap smear between November 2017 to March 2019 who were evaluated by colposcopy and by calculating modified Reid's colposcopic index (RCI). Special attention was also paid to colposcopic signs like Inner border sign, Ridge sign and Rag sign. Collected data was entered in MS- excel and was then analysed using SPSS-16 version. Significant factors in disease were considered using multi variate logistic regression. $p<0.05$ was considered significant.

Results: Out of the 50 women, 26% had grade 2/3 acetowhite areas,22% had negative Lugol's iodine uptake and 8% had abnormal vasculature. 60% of those who had a modified RCI score of ≥ 6 had HSIL (high grade squamous intraepithelial lesion) and 20% had SCC (squamous cell carcinoma). On assessment of colposcopic signs, 12% had inner border sign, 16% had ridge sign and 8% had rag sign. Out of all women with positive inner border sign, 66.7% had HSIL on histopatholgy. In women with positive ridge sign, 62.5% had HSIL and 12.5% had SCC. Among those with positive rag sign, 75% had HSIL and 25% had SCC on histopathology.

Conclusion: Colposcopic evaluation of cervix with modified Reid's colposcopic index and these colposcopic signs is highly indicative of cervical epithelial cell abnormalities. Hence, women with persistent inflammatory pap smear should be subjected to colposcopy and to tule out any evidence of high-grade lesion and malignancy.

Theme: Infertility & IVF

[IN0101]

Correlation of Serum AMH with Clinical, Biochemical and Ultrasonographic Parameters Among Infertile Women with PCOS

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Introduction: There are few studies about relationship between AMH levels with different clinical and biochemical parameters of PCOS and that too with contradictory results. It is uncertain whether increase in AMH levels has correlation with hyperandrogenism or oligo- anovulation. It is still not clear whether hyperandrogenism cause increase in AMH levels or an increase in AMH levels cause hyperandrogenism. Thus the need of further studies to establish a correlation of AMH levels with clinical, biochemical and ultrasonographic parameters among infertile women with PCOS.

Objectives: To evaluate correlation of AMH with clinical (length of menstrual cycle, FerrimanGallway score, BMI, Waist /Hip ratio, BP), biochemical (LH/ FSH ratio, free androgen index (FAI), triglycerides, fasting & 2 hour post 75 gm glucose- insulin and plasma glucose levels) and ultrasonographic (ovarian volume and day2/3 antral follicle count)in infertile women with PCOS.

Method: An observational cross sectional study was conducted at Lady Hardinge Medical college and Hospital, Delhi during the period November 2018 to March 2020. A total of 143 infertile women between 20-35 years of age having PCOS based on the revised Rotterdam diagnostic criteria were recruited for study after taking informed consent. Menstrual history, clinical manifestations of hyperandrogenism like FG Score, BMI, BP, Waist hip ratio, lipid profile AMH, Day 2/3/4 LH/FSH ratio, FAI, testosterone, DHEAS and androstenedione, estradiol, fasting insulin and plasma glucose and 2 hour post 75 gm glucose-insulin and plasma glucose levels were collected. Transvaginal ultrasound assessment for ovarian follicles and volume was done. All participants were then divided in four phenotypes of PCOS based on Rotterdam's criteria.

Results: Total cholesterol more than 200mg/dl was seen in 11.2%, triglycerides >150 mg/dl was in 14%, LDL: >130 mg/dl was in 7.7% and HDL≤40mg/dl was in 34.3%. Such deranged lipid profile can later on manifest into metabolic syndrome. In metabolic parameters, impaired fasting glucose was seen in 4.1% women and impaired glucose tolerance was seen in 12.5% women. 32.9% women had increased HOMA IR ≥3.8. Diabetics were found to be 2.09%. Metabolic syndrome was present in 18.8% women. Phenotype D (O + P) was found to be the commonest. Mean serum AMH was highest in both phenotype A (O+HA+P) and C (P+ HA) having common feature of hyperandrogenism thus suggesting correlation of serum AMH with hyperandrogenism. The mean FG score being highest in the phenotype A and lowest in phenotype D. The mean cycle length (days) being highest in the phenotype A. In clinical parameters, a significant positive correlation between cycle length and AMH ($r = 0.17$, $p = 0.047$) was present. In hormonal parameters, there was a weak negative correlation between SHBG and AMH, and this correlation was statistically significant ($r = -0.22$, $p = 0.007$).

Conclusion: AMH had positive correlation with cycle length (oligo-anovulation) and weak negative correlation with SHBG. With rest of the parameters there was no significant correlation with AMH.

[IN0102]

A Randomized Controlled Study Of Combination Of Human Chorionic Gonadotrophin And Clomiphene Citrate Or Clomiphene Citrate Alone For Ovulation Induction In Women With Primary Anovulatory Infertility

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Objective: To evaluate whether combination of Human Chorionic Gonadotrophin and Clomiphene Citrate results in higher pregnancy rates compared to Clomiphene Citrate alone in women with primary anovulatory infertility

Design: Randomized controlled crossover study.

Setting: This study was conducted in the Department of Obstetrics and Gynecology, Lady Hardinge Medical College and Smt. SuchetaKriplani Hospital, New Delhi from 1st November 2018 to 31st March 2020

Patient(s): Women with primary anovulatory infertility (WHO class II ovarian dysfunction) with oligomenorrhea or amenorrhea between 21-30 years and Body mass index (BMI) between 18 and 29 kg/m2 with normal levels of serum prolactin, serum TSH and serum LH/FSH ratio < 2 and no other known cause of infertility.

Interventions(s): A total of 100 patients were selected and randomly divided using online software into two groups of 50 women in each to decide regarding the protocol to be started and followed for a maximum of 4 cycles of ovulation induction or till they conceive, whichever was earlier.

One group received CC 50 -100mg + HCG (5,000 IU IM) when follicle size reached 18 mm or more in diameter as determined by ultrasound while another group received CC 50-100 mg alone. Timed intercourse was advised 5 days after the last dose of clomiphene citrate on alternate days in both groups for 10 days. For each patient two protocols were used alternately.

Main Outcome Measure(s)

1. Proportion of women with positive urinary pregnancy test in each group when they were overdue by 5 days from expected day of menses.
2. Mean duration of luteal phase: The length of luteal phase was defined as the interval between the rupture of follicle on ultrasound and till the beginning of next menses.
3. Mean progesterone level one week after ovulation: Serum progesterone level > 3 ng/mL one week after ovulation was interpreted as evidence of ovulation.

Result(s)

- Pregnancy rate among women in CC only group was 18.05% and CC plus HCG group was 22.2%. Although pregnancy rate was more in women who received CC+HCG but the difference was not statistically significant (p = 0.548).
- The mean serum progesterone one week after ovulation in women who ovulated in CC group was 9.63±4.93 ng/mL and 10.82±5.67 ng/mL in those who ovulated with CC+HCG, the difference was statistically not significant.
- The mean serum progesterone one week after ovulation in group conceived with CC alone was 15.59±5.17 ng/mL while in group conceived with CC+HCG was 19.32±3.77ng/mL, the difference was statistically not significant.
- There were no serious adverse events or multiple-gestation pregnancies in either group. The side-effects profile was similar in the two treatment groups.

Conclusion(s): Addition of HCG to CC ovulation induction therapy does not appear to improve pregnancy rates and midluteal progesterone level in women with WHO Class II anovulatory infertility during natural intercourse-advised cycles.

[IN0103]

Effect of Laparocopic Ovarian Drilling on Ovulation Rate in Women with Clomiphene Resistant Polycystic Ovarian Syndrome

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Introduction: Laparoscopic Ovarian Drilling (LOD) is a surgical treatment that can trigger ovulation in women with Polycystic Ovarian Syndrome (PCOS). It is one of the method to treat women with clomiphene resistant PCOS.

Objective: This study was undertaken to study the effect of Laparoscopic Ovarian Drilling on ovulation rate in women with PCOS.

Methods: In this study, 30 Clomiphene Citrate resistant PCOS women between age group 20-35 years, desiring pregnancy with a normal hysterosalpingogram and normal Husband Semen Analysis (according to WHO criteria) were included in the study. All patients under inclusion criteria were assessed clinically and sonographically.Luteinising Hormone (LH), Follicle Stimulating Hormone (FSH) and S. Testosterone were collected on Day 2/3 follicular phase of menstruation before and 1month after Laparoscopic Ovarian Drilling. Patient were taken up for LOD in between day 5th-9th of the menstrual cycle. (Each ovary cauterised at 4 points, 4mm deep, for 4 seconds using 40 W of power). Spontaneous ovulation rate was assessed by Ultrasonographic follicular monitoring following LOD in 2 successive cycles.

Results: Our results showed that mean Testosterone levels reduced after ovarian drilling from 46.56 ±24.06 ng/dl before LOD to 35.02 ± 19.85 ng/dl after LOD. Ovulation rate after ovarian drilling was 80% (24 out of 30 cases) and Cumulative pregnancy rate after ovarian drilling was 33.33% (8 out of 24 cases)

Conclusions: Laparoscopic Ovarian Drilling is effective in Clomiphene Resistant PCOS in inducing ovulation which may be by decreasing testosterone levels. So before opting for gonadotropin treatment for clomiphene citrate resistant PCOS, LOD may be considered as an alternative option in these cases.

[IN0104]

Effect of Body Mass Index on Free Androgen Index in Women with Polycystic Ovarian Syndrome

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Introduction: Polycystic ovary syndrome (PCOS) is a complex and heterogeneous endocrine disease, with hyperandrogenism as the most significant clinical manifestation. It is observed that obese females with PCOS are at higher risk for metabolic syndrome due to severe hyperandrogenemia.

Objective: The study aimed to study the effect of Body Mass Index (BMI) on free androgen Index (FAI) in women with PCOS and to correlate it with hirsutism.

Methods: It was a cross-sectional observational study including 140 women of 18 to 45 years of age, diagnosed with PCOS as per Rotterdam criteria. Women were then classified according to the BMI classification as follows: Lean PCOS, overweight PCOS and obese PCOS. FAI was calculated as the percentage ratio of total testosterone to Sexhormone-binding globulin values (both in nmol/L). Levels of FAI and other hormones were compared among the three categories, and correlation of FAI with hirsutism was evaluated.

Results: Significant positive correlation was observed of BMI with mFG (modified Ferriman Gallwey) score and FAI. Although, no significant difference in the value of FAI was observed among three BMI groups (lean, overweight and obese PCOS). Negative correlation was demonstrated between SHBG and BMI while no significant correlation was found between total testosterone and BMI. No significant correlation was observed of BMI with LH, FSH, 17-hydroxyprogesterone, post parandial insulin and DHEAS.

Conclusion: There is positive correlation of body mass index with free androgen index and mFG i.e. obesity causes severe form of both biochemical as well as clinical hyperandrogenism. It can be concluded that obese PCOS has more severe form of hyperandrogenism than overweight and lean PCOS.

Keywords: PCOS, free androgen index, hyperandrogenism, body mass index, obesity, modified Ferriman Gallwey score.

[IN0106]

Role of Diagnostic Hysterolaparoscpy in The Evaluation of Female Infertility at A Tertiary Care Hospital

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Introduction: Infertility affects about 10-15% of reproductive age couples. It is a serious problem, which poses great psychosocial and emotional stress to the couple facing infertility.Diagnostic Hysterolaparoscopy (DHL) is an essential investigation in the evaluation of female infertility.

Aims and Objectives: To find out the incidence of type of infertility and its various contributing factors leading to infertility in the study population.

Material and Methods: This is a retrospective study conducted in the department of obstetrics and gynaecology at Mahatma Gandhi Hospital, Sitapura, Jaipur for a period of 6 months from July 2019 to December 2019. The study consisted of 85 women who presented with primary or secondary infertility in gynaecology OPD. After proper history and examination, hysterolaparoscopy with chromopertubation test (CPT) was performed in all 85 participants.

Results: In our study, 72.9% had primary infertility and 27.1% had secondary infertility. On hysteroscopy, 34.1% had abnormal findings. Most common abnormal finding was septum (11.8%) followed by polyp (5.9%) and myoma (4.7%). On laparoscopy, our study revealed abnormality in 89.4% cases. The most common factorfound on laparoscopy was tubal pathology contributing to 42.3 % followed by peritoneal factors 35.3%, ovarian factors 20% and uterine factors 9.4%. In our study, peritubal adhesions (14.1%) was the most common tubal factor followed by hydrosalpinx (11.7%). Adhesions (16.5%) were also the most common pathology seen in peritoneal factor infertility. The most common ovarian factor found was polycystic ovarian disease (PCOD) 9.4% followed by ovarian cyst 7.1%. The most common uterine factor was fibroid 5.9%. On CPT, 5.9% had unilateral tubal block and 8.2% had bilateral tubal block.

Conclusion: Diagnostic hysterolaparoscopy has emerged as an effective and safe tool for evaluation of female infertility. Laparoscopy helps in direct visualization of the abdominal cavity and hysteroscopy helps in visualizing cervical canal, uterine cavity, endometrium and bilateral ostia. The main advantage is that diagnosis as well as the correction of abnormality can be done at a single sitting.

[IN0207]

Comparison of Fallopian Tube Sperm Persudion with Standard Intrauterine Insemination

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Introduction: Infertility is defined as inability of a couple to conceive after 1 year of unprotected intercourse. In women who are more than or equal to 35 years, this time is further reduced to 6 months. Intrauterine insemination (IUI) is a common treatment for couples with subfertility that does not involve the fallopian tubes. In FSP sperm preparation is identical to that used in sIUI, but the spermatozoa are diluted in a larger volume of medium up to 4 ml. Fallopian tube sperm perfusion (FSP) shown a pregnancy rate per cycle of 26.9% in patients with unexplained infertility.

Objective: To evaluate two different methods of insemination i.e. standard intra uterine insemination (sIUI) and fallopian tube sperm perfusion (FSP) for feasibility, patient tolerability and any procedural side effects.

Methods: This prospective randomized parallel study design included 160 infertile women <38 years of age where IUI is indicated. Detailed history was recorded, detailed clinical examination was conducted and the baseline investigations were performed. Each patient was randomly allocated into two groups: Group sIUI including 80 patients who had undergone sIUI and Group FSP including 80 patients who had undergone FSP. Two cycles of each modality performed. The conception of pregnancy among both groups were noted and compared.

Results

- After cycle 1, as compared to sIUI group, FSP group had comparable ectopic pregnancy and twins, comparable number of patients who conceived and comparable number of patients who did not conceived (P>0.05).
- In the cases with unexplained infertility, in cycle 1, FSP and sIUI groups had comparable number of patients who conceived (9.52% vs. 9.09%, P=1); in cycle 2, in FSP group, there were significantly morepatients who conceived (21.05% vs. 0.00%, P=0.047).

Conclusion: The cost of sIUI and FSP is tremendous. So, sIUI should be the first line of treatment for the patient who need IUI as it is cheaper and patient friendly. We conclude that FSP over two cycles of treatment offers an advantage over the sIUI, and could replace the sIUI in certain indications such as unexplained infertility for artificial insemination. Thus, it could be used as an alternative for couples with non-tubal infertility before moving on to the IVF treatment.

[IN0208]

Inflammatory Markers in Peritoneal Fluid of Infertile Patients Undergoing Hysterolaparoscopy

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Background: Infertility affects 10-15% of reproductive age couples. Many studies have implicated inflammatory cytokines which are essential mediators of immune system in the patho-mechanism of this disorder.

Objectives: Weconducted a cross-sectional study to detect the levels of inflammatory markers (TNF-α, IFN-γ, VEGF, IL-1β, IL-6 and IL-8) in fluid from pouch of Douglas amongst infertile patients who underwent hysterolaparoscopy and compared it with those who underwent laparoscopic sterilization. Also, we analysed the correlation of the levels of these markers among various causes of infertility.

Methods: This study was conducted in the Departments of Obstetrics & Gynecology and Biochemistry, JIPMER from March 2017-October 2018. A total of 126 participants were recruited and were divided in two groups (63 participants in each group), group-1 included infertile patients who underwent hysterolaparoscopy and group-2 included women who underwent laparoscopic sterilization. Five ml of peritoneal fluid was collected and the levels of TNF-α, IFN-γ, IL-1β, IL-6, IL-8 and VEGF were estimated using ELISA kits and noted.

Results: Women in both groups had a comparable socio-demographic profile. The levels of IL-6 and TNFα were significantly higher in the infertile patients compared to the patients who underwent sterilization. The different causes of infertility found in our study included unexplained infertility (87.3%). endometriosis (7.9%) and PID (4.8%). When the levels of markers were correlated among different causes of infertility, significant difference was observed in the median levels of VEGF and IL-1β with higher values in patients with endometriosis and PID compared to unexplained infertility. We also found that patients with unexplained infertility had significantly higher levels of TNFα and IL-6 when compared to the fertile women.

Conclusion: The peritoneal fluid levels of the six markers were detected up to variable degrees in both the groups. The levels of IL-6 and TNFα were significantly elevated in infertile patients when compared to those who underwent sterilization. No significant difference was observed between the two groups with regards to other markers.

[IN0209]

Metabolic Profile of Women with Different Phenotypes of PCOS

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Introduction: Polycystic ovary syndrome (PCOS) is one of the common endocrine disorders affecting 6-8% of women in the reproductive age. Different phenotypes of PCOS are defined based on Rotterdam criteria. Metabolic derangements are common in women with PCOS.

Aims and Objective

To study phenotype and metabolic profile of women with PCOS

- To find the prevalence of four phenotypes of PCOS
- To compare the metabolic profile of women with PCOS and that of four phenotypes of PCOS

Materials and Methods: In this comparative cross sectional study, we recruited a total of 207 patients aged 18-39 years;138 patient with PCOS and 69 women without PCOS as control group. Clinical evaluation was done and blood sample was taken for biochemical and endocrinology evaluation.

Results

Metabolic profile in PCOS Vs Non PCOS

- The mean values of blood glucose and serum insulin (fasting state and 2hr after 75 gm oral glucose), HbA1C, lipid profile (total cholesterol,TG, LDL), TG/HDL ratio and homeostasis model assessment insulin resistance (HOMA-IR) of the PCOS group were significantly higher than the values of control group. The HDL level of the PCOS group was significantly lower than that of control group.
- The prevalence of raised BMI in overweight/obese range, impaired glucose tolerance, diabetes and metabolic syndrome was significantly higher in PCOS group than in control group.
- The mean value of total testosterone and mean free androgen index in the PCOS group was significantly higher than that in control group. The mean sex hormone- binding globulin (SHBG) level in the PCOS group was significantly lower than in control group.

PCOS Phenotype

- Phenotype A (Hyperandrogenemia + Oligo/anovulation + Polycystic ovarian morphology) was the most prevalent (31.4%) followed by phenotype D (Oligo/anovulation + Polycystic ovarian morphology) (17.4%), phenotype B (Hyperandrogenemia + Oligo/anovulation) (12.1%) and phenotype C (Hyperandrogenemia + Polycystic ovarian morphology (5.8%).
- The mean values of blood glucose on 2hr OGTT, fasting insulin, 2 hr OGTT insulin, and HOMA-IR were significantly higher in phenotype A as compared to the other three phenotypes.

- The prevalence of raised BMI in overweight/obese range and diabetes was significantly higher in phenotype A than other phenotypes.
- The prevalence of impaired glucose tolerance and metabolic syndrome was also higher in type A phenotype, however the difference did not reach statistical significance.

Conclusions: This study provides evidence that various metabolic parameters are significantly deranged in subjects with PCOS. BMI in overweight/obese range, prediabetes (impaired glucose tolerance), diabetes, deranged lipid profile, metabolic syndrome and insulin resistance were more common in PCOS than in controls. Phenotype A was the most common phenotype of PCOS in studied population and was metabolically most compromised among all the PCOS phenotypes. These subjects had much higher prevalence of raised BMI (overweight/obese), insulin resistance and diabetes as compared to the other phenotypes of PCOS.

[IN0210]

Relationship Between Vitamin D Levels And Insulin Resistance In Women Of Polycystic Ovarian Syndrome

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Background: Polycystic ovarian syndrome (PCOS) is the most common female endocrine disorder in women of reproductive age group. PCOS is characterized by increased ovarian and adrenal androgen secretion and its symptoms as hirsutism, acne and/or alopecia, menstrual irregularity, polycystic ovariesand profound metabolic alterations like insulin resistance, hyperinsulinemia and central obesity. There is increasing evidence that vitamin D metabolism affects insulin and glucose metabolism and therefore may play a role in the development of Type 2 diabetes mellitus. Vitamin D deficiency has been proposed as the possible link between insulin resistance in PCOS. It has been observed that 25-hydroxyvitamin D is positively correlated with insulin sensitivity and negatively with beta-cell function. The current study has been done to find a possible correlation between vitamin D levels and insulin resistance in PCOS.

Methodology: It was a Cross sectional observational study including 40 females of age group 15-45 years diagnosed with PCOS according to Rotterdam's criteria. All PCOD patients were advised biochemical and hormonal tests. Women were divided into 3 study groups according to BMI calculated from Quetelet's formula. Insulin resistance was estimated using the homeostatic model assessmentinsulin resistance (HOMA-IR) which was calculated as the product of the fasting plasma insulin value (mU/mL) and the fasting plasma glucose value (mg/dL), divided by 405.HOMA-IR > 2.5 was taken as the cut off for Insulin resistance.

Observation and Result: Out of a total population size of 40 PCOS patients 29 (72.5%) women were insulin resistant. 90% of the total women were vitamin D deficient. The mean HOMA-IR in the serum vitamin D deficient group was 3.15 ± 0.79 whereas it was 1.89±0.50 in vitamin D insufficient group. A significant negative correlation was found between vitamin D and insulin resistance (p value <0.001).

Conclusion: A significant correlation was found between insulin resistance and vitamin D in women of PCOS. Therefore vitamin D supplementation may improve menstrual irregularities and metabolic disturbances.

Keywords: PCOS, HOMA-IR, Vitamin D.

[IN0211]

Evaluation of Uterine Causes of Infertility by Transvaginal Ultrasound (TVS), Hysterosalpingograhy (HSG) and Hysteroscopy (HYS)

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Objective: To evaluate uterine causes of infertility by various modalities like Transvaginal Ultrasound (TVS), Hysterosaplingography (HSG) and Hysteroscopy.

Method: Fifty Infertile women were evaluated by various modalities to diagnose uterine causes of infertility, with age between 18-35years with primary or secondary infertility. Other factor of infertility such as male factor, ovarian factors, tubal factors, infertility due to hormonal factors, and acute PID by clinical examination were excluded.

Results: In our study for detecting uterine factor of infertility, TVS was found to be simple, non-invasive and screening modality with Sensitivity 40%, Specificity 100%, PPV 100%, NPV 52.6%. HSG was found to be simple, safe and minimally invasive radiologic procedure with Sensitivity 56.5%, specificity 96.1%, PPV 92.8%, NPV 71.5%.Hysteroscopy can be recommended the gold standard for evaluating the uterine cavity.

Keywords: TVS (Transvaginal ultrasound), HSG (hysterosaligography), PID (Pelvic inflammatory disease), Infertility.

[INF0312]

Endometriosis Fertility Index for Prediction of Fertility Outcome in Endometriosis

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Objective: To observe predictability of EFI scoring for fertility outcome in patients having endometriosis.

Methods: A prospective study was done in endometriosis patients combined with infertility in India, Lok Nayak Hospital from September 2018 to March 2020, after laparoscopic surgery, these 30 patients underwent either 2 cycles of IUI or 2 Cycles of IVF depending on patient profile and were then followed up for next 6 months following the procedure for pregnancy outcome.

Results: In our study, 11 out of 30 patients conceived i.e. about 36.6% conceived. Out of eleven patients, four patients conceived in first cycle of IVF, four patients conceived in second cycle of IVF, two patients conceived spontaneously, one of them conceived by IUI. The area under the ROC curve (AUROC) for EFI score predicting outcome: conceived vs failed to conceive was

0.672 (95% CI: 0.447 - 0.897) while for rAFS score it was 0.6 (95% CI: 0.396 - 0.805). EFI was found to be slightly better in predicting the fertility outcome in comparison to rAFS score. Cut off for EFI score came out to be 7 in our study.

Conclusion: In this prospective study, no significant difference was observed between EFI and rAFS score in predicting the fertility outcome.

[INF0313]

Effect of Isosorbide Mononitrate on Pregnancy Rate in Women Undergoing Insemination - A randomized controlled study

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Objectives: The aim of this study was to evaluate the effect of isosorbide mononitrate as nitric oxide donors in clomiphene citrate cycles in women with unexplained infertility undergoing intrauterine insemination and to compare pregnancy rates in study and control groups.

Materials and Methods: This randomized control study included 60 patients with unexplained infertility undergoing IUI. 30 patients included under study group who received clomiphene citrate 100mg OD orally from day 3 to day 7 and isosorbide mononitrate vaginal tablet 10mg OD from day 5 till diagnosis of pregnancy or occurrence of menstruation. The control group was administered clomiphene citrate 100mg OD orally from day 3 to day 7. Primary outcome: Pregnancy rate, Secondary outcomes: Number of follicles on the day of trigger, endometrial thickness, uterine artery blood flow indices, endometrial zonal blood flow. Statistical analysis was done using SPSS 25 software. P value less than 0.05 was considered significant.

Results: The Study group had increased pregnancy rate, higher mean number of dominant follicles & larger size dominant follicles, increased endometrial thickness, higher zonal blood flow, lower uterine artery doppler flow indices (PI&RI) on the day of trigger as compared to control group .

Conclusion: Nitric oxide donor like isosorbide mononitrate can be used as an adjuvant treatment with clomiphene citrate to increase pregnancy rates and ovulation in women with unexplained infertility undergoing clomiphene citrate stimulation with intrauterine insemination as it act as a vasodilator and perfusion enhancer.

Key words: Unexplained infertility, Clomiphene citrate, NO donors, IUI

Theme: Miscellaneous

[MI0101]

Prevalence of Satisfaction and Complication Rate in IUD Users in Low Resource Setting

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Introduction: Satisfaction rate for Cu-IUD is still under research because of the complications related to IUD. Cu-IUD is very effective means of contraception but only 1.5% of married women between age 15-49 years use it owing to the myths associated with IUD.

Objective: To estimate the prevalence of satisfaction among IUD users. To find the complication rate and it's association with satisfaction.

Material and Methods: It was a cross sectional observational study conducted in Department of Obstetrics and Gynaecology. Total 200 IUD users were interviewed for the complications and satisfaction associated with IUD usage, using questionnaire. The study was done over the period of two months. The questionnaire was validated based on the previous study. Data was analyzed by Wilcoxon Mann Whitney U test, Fisher's exact test and Chi Squared test using SPSS 23. The p value <0.05 was taken as significant.

Results: Mean age of the women in our study was 27.59 years. The mean duration of IUD usage in our study was 27.9±35.89 months. Copper IUD was used by majority of women 181/200 (90.5%) and postpartum type of insertion was present in 90/200 (45%). Out of 200 women, 179 (89.5%) were satisfied and only 21(10.5%) were unsatisfied with IUD use. Total 87 (43.5%) women had complications associated with IUD. Overall complications were present in 70/179 (39.1%) women who were satisfied with IUD versus 17/21(81%) women in non-satisfied group (p value<0.001). Lower abdominal cramping pain was the most common complication and present in all 87 (100%) women. Change in menstrual blood amount and pattern was observed in 80(91.95%) out of 87 women. Majority of women (61/80) had bleeding related complications only for initial 6 months. However, duration of bleeding problems was significantly less (p value <0.001) in "satisfied" group (1.96±4.98 months) than "not satisfied group" (7.52±10.3). Only 26/87 (29.88%) women opted for treatment for IUD related complications. Out of 26 women, 14(53.8%) got relief . The women who wanted removal of IUD were only 18/200 (9%) and out of that only eight women got it removed for complications.

Discussion: The study observed that majority of the women were satisfied with their IUD. Although, the overall complication rate seems high in IUD users but it was significantly less in "satisfied" group. Despite the complications related to IUD, most of them were present in the initial period i.e. 6 months post insertion. After that, maximum women got adjusted with the IUD and side effects were also less. Only minimal number of women wanted removal of IUD for it's complications. This study concludes that despite complications, the satisfaction rate is high and benefits of contraceptive protection outweigh the insignificant side effects.This study proves the need for improving knowledge and awareness regarding IUD in the community.

[MI0102]

Enhancing Postpartum IUCD Coverage at A Tertiary Care Facility: Aquality improvement initiative

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Introduction: Sixty five percent of women in the first year postpartum have an unmet need for family planning in India. Postpartum intrauterine device (PPIUCD) is a safe and effective way to provide long lasting reversible contraception to the postpartum women. It was seen that there was low coverage of deliveries with PPIUCD (average 4-5%) at Lady Hardinge Medical College(LHMC), a tertiary care hospital in New Delhi, India. This was the trigger to initiate a quality improvement initiative to increase the PPIUCD coverage at the facility.

Objective: The SMART aim was to increase the percentage of deliveries covered by PPIUCD at LHMC from current data of 4-5% to 10% in 2 months time.

Method: A fish-bone analysis of the problem was done and the following probable causes were identified: lack of routine counselling for family planning in antenatal women; lack of existing policy; lack of sensitization & training of residents; and erratic supply of IUCD. A Quality improvement team was constituted with representatives of faculty members, residents, interns, nursing officers and family planning (FP) counsellors. The following interventions were done-whatsapp group of residents was made & this platform was used to sensitize them towards importance of PPIUCD and also share technical knowledge; PPIUCD insertion technique video was posted on resident's whatsapp group; residents were provided hands on training on Zoe's model to make them confident in PPIUCD insertion; and daily counselling of antenatal women admitted in the hospital was started by the counsellors posted in the department of family planning. Regular feedback was sought form the residents through whatsapp and from patients through client exit interviews. The outcome indicator was the percentage of deliveries covered by PPIUCD out of the total deliveries conducted in a month. The data collection was done monthly by the Auxillary Nurse Midwife (ANM), posted in the Family Planning department, from the labour room and maternity Operation Theatre (OT) registers.

Result: The PPIUCD insertion rate shot up from 4.5% to 20 % at the end of the 1st month but it fell to 12.5% at the end of the 2nd month. The reasons for the fall were analysed and it was found that one FP counsellor had proceeded on a long leave and another one was shifted out of the department leading to reduced frequency of counselling. To overcome this, interns were roped in for daily routine counselling. Another problem faced was stockout of IUCD during emergency hours which was resolved by generating written instructions to nursing officers of labour room and maternity OTs to maintain a buffer stock of IUCD at all times. The insertion rates improved subsequently and currently a PPIUCD insertion rate of 25-30% has been sustained at the facility despite the COVID-19 pandemic.

Conclusion: Postpartum family planning services are extremely important for limiting the population growth. Quality improvement initiatives have the potential to facilitate effective implementation of the family planning programs by plugging the gaps and initiating strategic utilization of the resources.

[MI0103]

Effect of Pre-pregnancy BMI on Gestational Weight Gain

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Introduction: In normal pregnancy, variable amount of weight gain is a constant phenomenon. It has been seen in many studies that GWG has a role to play in overall fetomaternal outcome. Therefore during ANC, all women are advised to gain a certain amount of weight depending on their pre pregnancy BMI, using Institute of Medicine 2009 guidelines. However, it's been seen that not all women gain weight in the specified range - some gain more while others gain less than the recommended weight. In a study by Michael L. Power et al, more than 50% of overweight and obese women gained above IOM recommendations and most underweight women gained weight below recommendation (33%). In a data collected by Zahra Yekta et al in 2006 in Iran, it was seen that only half of the study population had normal pre-pregnancy BMI. Excessive weight gain was seen in more than half of the obese women. On the other hand, Soltani et al in their study found that most of the women gained inadequate weight in pregnancy as per IOM recommendation, especially those who had normal BMI.

Objective: To study the relationship between pre pregnancy BMI and weight gain during pregnancy.

Method: The study population was divided into 4 groups according to the pre pregnancy BMI (using WHO BMI cuts off points for Asian population) as underweight, normal weight, overweight, and obese. Pattern of gestational weight gain (gaining weight during pregnancy more than recommended, recommended or less than recommended) in each group was observed using the 2009 IOM GWG guideline and the data was statistically analysed.

Results

Table 2: BMI Distribution of the Study Groups

	BMI				
Gestational weight gain	Underweight (22)	Normal (164)	Overweight (34)	Obese (80)	Total (300)
Below recommended	12	85	1	9	107
	54.5%	51.8%	2.9%	11.3%	
Recommended	8	63	17	23	111
	36.4%	38.4%	50.0%	28.8%	
Above recommended	2	16	16	48	82
	9.1%	9.8%	47.1%	60.0%	
98.196, p-value = 0.001*					

Conclusions: A significant number of women enter in pregnancy with BMI in overweight or obese category i.e. 38% women in this study (114 out of 300 women). The tendency to gain more or less than recommended weight depends on the pre-pregnancy BMI. Underweight women have a tendency to gain less than recommended weight. Overweight and obese women have tendency to gain more than recommended weight.

Hence it is better to advise women to enter into pregnancy with normal BMI. If they are encountered after conception then overweight and obese women should be sensitised that they have the tendency to gain more than recommended weight in pregnancy. Likewise underweight women should be sensitised that they have the tendency to gain less than recommended weight. All women should be made aware that for better fetomaternal outcome, ideal GWG is important.

[MI0104]

To Study Pre-operative Vaginal Painting With Povidone Iodine and with Chlorhexidine Gluconate in Prevention of Post Cesarean Section Infectious Morbidity

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Introduction: Preoperative skin and vaginal preparation with an antiseptic solution to prevent postoperative infection is a routine procedure for many gynecological procedures. Cleansing of all body surfaces that could be in contact during a surgical procedure helps to minimize the presence of micro-organisms and risk of infection. This study was employed to evaluate the effect of prophylactic pre-operative vaginal painting with chlorhexidine gluconate (CG) or vaginal painting with povidone-iodine (PI) on the prevention of post cesarean infection among women undergoing elective cesarean delivery.

Objectives: Comparision of preoperative vaginal painting with povidone iodine with chlorhexidine gluconate with no vaginal painting in prevention of post cesarean section infectious morbidity.

Methods: The present study was a prospective randomized control trial, carried out on 219 pregnant women who underwent elective cesarean section in Department of Obstetrics and Gynaecology, Pandit B. D. Sharma PGIMS, Rohtak. A total of 219 women were enrolled in this prospective study and they were further divided in three groups based on antiseptic applied half an hour before CS.Group 1 had vaginal painting with povidone-iodine. Group 2 had painting with chlorhexidine gluconate and Group 3 served as control. Antimicrobial prophylaxis was administered within 30 minutes of cesarean section.All subjects included in the study were analysed on post op day 3, post op day 14 and post op day 30 for postoperative fever, wound infection orendometritis. Data were analyzed using SPSS software and the P value < 0.05 was consideredsignificant.

Results: This study showed that demographic data of the study subjects as age, gestational age, body weight and BMI did not show any significant difference between control and intervention groups. The operation variables such as the postoperative fever, wound infection and endometritis were observed in the three groups. This study showed that frequency of post cesarean site infection in group 1, 2 and 3 was 3%, 7.8% and 6.3% respectively (p = 0.471). When all 3 groups were compared for post febrile morbidity, 3 (4.5%) patients in group 1(PI), none in group 2(CG) and 2 (3.2%) patients in group 3(C) had postoperative fever, which was statistically not significant, p value = 0.253.None of the patients in any group had endometritis. Overall composite infectious morbidity in group 1, 2 and 3 was 6%, 7.8% and 6.3% respectively which was statistically not significant, p value = 0.907.Also, there was nosignificant difference in post cesarean site infection, postoperative fever and endometritis between these women with and without preoperative vaginal cleansing with PI and CG in elective CS.

Conclusion: The present study indicated that preoperative vaginal painting with PI or CG in women undergoing elective cesarean delivery did not show any advantage in terms of reduction of post cesarean infectious morbidity as compared to no antiseptic vaginal painting.An addition of this extra intervention in preoperative preparation of elective cesarean delivery may in fact increase health care burden therefore, should not be practiced.

Keywords: Cesarean delivery, Endometritis, Chlorhexidine Gluconate, Povidone iodine.

[MI0105]

Comparison of Warm vs Room Temperature Normal Saline as Distension Medium for Pain Relief in Office Hysteroscopy: A randomized controlled trial

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Introduction: Hysteroscopy has emerged as an indispensable tool in the era of modern Gynecology becoming the gold standard for diagnosis of uterine pathologies as well as for therapeutic operative management. With medical advancements, operative hysteroscopic procedures have migrated from the operating room to the cheaper office setting. Pain along with the inability to negotiate the cervical os are cited as the main reason for failed office hysteroscopy prompting several studies on pain reducing strategies including 'no-touch' approach, use of smaller hysteroscopes and also, using normal saline in preference to carbon dioxide and glycine as distension media. Though it is believed that warming the distension fluid to physiological temperature of 37.5 decreases perceived pain but it has not yet been proven.

Objectives

1. Compare the degree of pain in patients undergoing hysteroscopy with normal saline at room temperature as distension media with that perceived using saline warmed to 38-40 as distension media.
2. Compare the difficulty level in the two groups.

Methodology

It was a prospective, randomized, controlled trial conducted at the Department of Obstetrics and Gynaecology, AIIMS, New Delhi from June 2019 to December 2019.

- A total of 100 premenopausal woman planned on the basis of symptomatology, clinical findings and/or basic imagingpatients were included in the study, 50 in the test group of warm saline and 50 in the control group of room temperature saline after randomization by means of a computer generated randomization table. All hysteroscopies were conducted by the same gynaecologist using rigid continuous flow, 5mm 30 hysteroscope.

  Pain was recorded using Visual Analogue Scale (VAS) of 0 to 10, where 4 or less is comfortable, 5 to 7 moderately painful

and 8 to 10 very painful.

Difficulty of doing the procedure was recorded using the Likert's scale where 1 is very easy while 5 is very difficult.

Results: There was no significant difference in the demographic profile, indications and pre-op findings between the two groups. The mean VAS at T0, T1, T15 for saline at room temp was 4.06, 2.49, 0.78 vs 4.56, 2.50, 0.78 for warm saline.

The mean Likert's scale for warm saline vs room temperature saline was 4.32 and 4.28 respectively.

Conclusion: There was no significant difference found between the two groups in terms of pain and difficulty of doing the procedure.

However, this study was done on a small number of subjects. A larger number of subjects should be studied for substantial and more conclusive resuts.

[MI0106]

Our Initial Experience with Chromosomal Microarray Analysis for Prenatal Diagnosis in Fetuses With Structural Abnormalities

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Background: Chromosomal microarray analysis (CMA) is a new molecular cytogenetic genomic hybridization technology offers high resolution, whole genome sequencingfor mutation detection. Copy number variants such as microdeletion or microduplication are not identifiable by conventional karyotype and can occur in 1.5 to 1.8% of routine pregnancy. The advent of microarray cytogenetic tool reveals such sub-microscopic chromosomal imbalances down to 50-100 kB level. Test has rapidly become a mainstay and recognized as first-tier test to identify cytogenetic abnormalities.

Aim: The study aims to evaluate cytogenetic abnormalitiesin a cohort of patients using comparative genome hybridization (CGH) in CMA for prenatal diagnosis in patients with normal QFPCR and Karyotypingwith structural abnormalties on Ultrasound.

Method: A total of 100 subjects was recruited and underwent CMA testing on amniotic fluid sample in fetuses with structural abnormalities at R & R Hospital, New Delhi. The proposed whole genome wide array CGHusing Affimetrixwas performed for all the participants following normal quantitative fluorescent polymerase chain reaction (QF-PCR) and karyotype.

Results: The proposed CMA test was significant ($p<0.005$) and effective, identified chromosomal anomalies with the pick up rate of overall 12%. Parental testing were, according to inheritance status, indicated the efficient identification of clinically significant subchromosomal deletions or duplications in fetuses with structural abnormalities.

Conclusion: The pre-test counseling using CMA maximize the diagnostic scope and has an edge over traditional invasive prenatal diagnosis and can replace conventional karyotyping in fetuses with structural abnormalities.

Keywords: Prenatal diagnosis, Chromosomal microarray, genome hybridization, copy number variants,

[MI0107]

A Comparative Study of the Technical Feasibility of Complete Salpingectomy With Partial Salpingectomy as a Method of Tubal Sterilisation at the Time of Caesarean Delivery

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Background: Recent theory on ovarian malignancy suggests its origin by primary foci within the fallopian tubes. Salpingectomy, thus, is believed to be protective against ovarian malignancy.

Methods: A prospective interventional single-blinded comparative randomized control study was conducted in the Department of Obstetrics and Gynaecology, E.S.I PGIMSR Basaidarapur, New Delhi. Women desiring permanent sterilisation at caesarean delivery were randomized into two groups: Group A underwent tubal sterilisation by modified Pomeroy's technique and group B underwent complete bilateral salpingectomy. Primary outcome was tostudy the technical feasibility of the procedure; secondary outcomes included were total operative time, time taken for the procedure, estimated blood loss, surgical complications and serum AMH at 6 weeks.

Results: Significant difference was seen in total operative time between groups A and B (p value < 0.0001). The sterilisation procedure time (minutes) in group A was 5 (4-6) and group B was 6 (5-6) with no significant difference (p-value- 0.13).

No significant difference was seen in the intra-op bleeding (400 ml in group A vs 300 ml in group B), post-op haemoglobin (g/dl) (4.56 ± 2.96 in group A vs 3.91 ± 2.7 in group B) and serum AMH levels (ng/ml) (group A 0.965 ± 0.12 vs 0.7 ± 0.09 in group B) and postoperative complications.

Conclusion: Considering the proven benefits of salpingectomy in the prevention of ovarian malignancy, the novel option of salpingectomy should be discussed with patients for permanent tubal sterilisation explaining the merits and demerits of the procedure.

Keywords: Salpingectomy, Ovarian cancer, tubal ligation, sterilisation

[MI0208]

Thyroid Status in Preeclamptic Patients and in Normal Pregnant Women – A case control study

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Introduction: Preeclampsia is defined in terms of hypertension and proteinuria, it can affect other maternal systems, so the presentation and progression of this disease is variable. The endothelial cell dysfunction plays an important role in the pathogenesis of preeclampsia. Modest decreases in thyroid hormones along with increased TSH level in maternal serum are correlated with severity of preeclampsia and high levels of endothelin.

Aim: To compare thyroid status in patients of preeclampsia and normal pregnant women in third trimester of pregnancy.

Materials & Methods: This case control study was performed on 50 preeclamptic women (case group) and 50 normal normotensive pregnant women (control group) in third trimester of pregnancy. The Inclusion Criteria was: Patients of Pre-eclampsia in third trimester of pregnancy. The exclusion criteria for both the groups were (a) History of any metabolic disorder before or during pregnancy (b) History of intake of any medications that may affect thyroid function (c) History of renal disease (d) History of hypertension (e) Previous history of congenitally malformed baby (f) Previous history of thyroid disease in pregnancy and the post- partum period. Levels of serum T3, T4 and TSH were estimated by the highly sensitive and precise immunoassay technique. To test for the differences in the mean values between the two groups for various quantitative parameters, Student's t-test was applied when the data followed the normal approximation. Differences in the proportions between different categorical variables were tested through Chi-square test of significance. P value less than 0.05 was considered as significant.

Result: The difference in Mean T3 value amongst case group and control group was not statistically significant with p = 0.844. The difference in Mean T4 value amongst case group and control group was statistically significant with p = 0.011. The difference in Mean TSH amongst case group and control group was statistically significant with p= 0.00068. Prevalence of hypothyroidism in preeclamptic women was 44% as compared to 16% in control group and p value was 0.00225, which was statically significant. If the titers of TSH were above 4.04 µIU/ml, then there was 4 times higher risk of the development of preeclampsia.

Conclusion: Present study suggested that primary hypo-functioning of the thyroid can accompany preeclampsia and possibly contribute to the pathogenesis. The decrease in thyroid hormones with concomitant increase in TSH titers has been found to be correlated with the severity of preeclampsia.

[MI0209]

Awareness and Understanding About Covid-19 In Pregnant Women: A questionnaire based study in a tertiary care hospital of western rajasthan

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Introduction: In December 2019, there was an outbreak of respiratory disease of unknown cause in Wuhan, China. This Severe acute respiratory syndrome was caused by coronavirus (SARS-CoV-2), which has become a public health concern worldwide now. It has been observed that Covid 19 infection has a negative impact on special population with age more than 60yrs and pregnant women. The pregnancy in itself is an immune suppressive condition.It is important for pregnant women to know about the mode of transmission, symptoms and preventive measures against Covid 19.

Objective: The objective of this study was to evaluate the level of awareness and outlook of pregnant women and practical measures taken by them against Covid-19.

Materials and Methods: It was a cross sectional study conducted for a period of one month among the pregnant women attending the maternity ward and labour room of the tertiary care centre at AIIMS Jodhpur. For this study, a questionnaire was framed from the training material from WHO website for the detection, prevention, response and control of COVID-19. A pre-validated questionnaire was divided into four parts: Demography, Awareness, Outlook and Preventive measuresagainst Covid-19.

For the questions on awareness, each correct response was given a score of one. The expected total score was 21 as in a few questions more than one correct answer was also there. The final score of each patient was calculated and categorized as good knowledge (score 15-21), average knowledge (score 8-14) and poor knowledge (less than 7 score). The data was recorded and analysed.

Results: The overall mean knowledge score of the participants was 18.0 ± 3.18 (mean ± standard deviation). Among 109 participants, 103 (94.5%) had good knowledge, 4 (3.7%) had average knowledge and 2 (1.8%) had poor knowledge about Covid 19. Majority of them had a positive attitude for the protective measures taken for the prevention of disease.

Conclusion: Since there is no valid treatment for Covid-19, prevention is the only key to curve this infection. In the present study, 94.5% pregnant women had overall good knowledge score about the mode of transmission, symptoms and preventive measures against Covid 19. It is observed that good knowledge about Covid 19 is associated with optimistic attitude of pregnant women resulting in appropriate practice against Covid 19. The low level of education and rural residence could be significant factors associated with poor knowledge of pregnant women. It is important to educate the pregnant women about the mode of transmission and preventive measures against Covid 19 to encourage an optimistic attitude and maintaining safe practice against Covid 19 infection.

[MI0210]

Clinical Efficacy of Second Trimester Postabortal IUD

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Introduction: Abortions account for apporoximaltely 8% of maternal mortality in India and effective family planning can prevent 90% of maternal mortality associated with septic abortions. Three out of four women leave the health facility after an abortion without any contraception. Provision of a LARC, especially an IUD immediately after an abortion seems to be the most feasible and effective method to prevent future unwanted pregnancy and associated morbidity and mortality. There is sufficient evidence of safety and efficacy of immediate insertion of the intrauterine device (IUD) after first trimester abortion. However there is paucity of evidence especially in Indian literature regarding the safety and efficacy of IUD inserted immediately after a second trimester abortion.

Objective: The present study was conducted to evaluate the clinical efficacy of second trimester post abortal IUD insertion.

Method: A prospective observational study was conducted in the Department of Obstetrics and Gynaecology over a period of one year. 200 women were recruited in two groups. Group 1 included women undergoing second trimester post abortal IUD insertion while group 2 included women undergoing interval IUD insertion. Followup visits were scheduled at 6 weeks and 6 months. Primary outcome was expulsion rate by 6 months while secondary outcomes were rate of perforation, hemorrhage, infection, method continuation by 6 months and pregnancy during the follow up period of 6 months.

Results: 87/100 (87%) women in group 1 and 81/100(81%) women in group 2 completed followup till 6 months(p=0.132). Insertion related pain of varying intensity was reported by 83/87(95.40%) in group 1 and 81/81(100%) in group 2 (p= 0.025). No perforation reported in either group. No significant difference was observed in bleeding immediately after insertion (13/87=14.94% vs 6/81=7.41%; p=0.062). At 6 weeks, 2/87 expulsions were noted in group 1 and none in group 2 (p=0.085). There were no expulsions after 6 weeks. By 6 months cumulative expulsion rate was comparable (p=0.09). Pain abdomen was the most common complaint at 6 weeks in both the groups (8/87=9.2% vs 5/81=6.17%; p=0.232). At 6 months, most frequent complaint was menorrhagia (3/82=3.66% vs 4/80=5%; p=0.337). Throughout the study period there were 5/87 removal in group 1and 4/81 in group 2 (p=0.41). The acceptability of IUD indicated by method continuation rate was comparable in both the groups (80/87=91.95% vs 77/81=95.06%; p=0.21).

Conclusions: Immediate insertion of IUD after second trimester abortion is as safe and efficacious as interval IUD insertion. Immediate post abortal IUD insertion should be offered to all women undergoing second trimester abotional as a part of routine post abortion care.

[MI0211]

Analysis of Caesarean Section Rate Using Robson Criteria

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Introduction: Recently, it has been noted that there is a dramatic increase in caesarean section rate. Caesarean section rates higher than 10% are not associated with reductions in maternal and newborn mortality rate. The WHO proposed the use of the Robson 10 group classification system as a global standard tool for assessing, monitoring and comparing caesarean section rate.

Objectives: To classify women undergoing caesarean section as per Robson criteria and analyse caesarean section rate using Robson criteria and also to study indications for caesarean section.

Method: This was a cross sectional study conducted over a period of one year. Data of patients undergoing caesarean section(CS) was collected and a statistical analysis of various parameters namely caesarean section rate, indications, maternal and neonatal morbidity and mortality was done.

Results: A total of 17,376 women delivered over the study period and C-section was performed in 4,522 women. The overall CS rate was 26.02%. Robson group 5, group 2 and group 10 were the major contributors to overall CS rate at 26.69%, 18.13% and 14.51% respectively. Fetal compromise, CPD, previous CS and malpresentation were the major indications for CS. PPH(3.47%) was the most common maternal complications followed by wound sepsis while prematurity was most common neonatal complication.

Conclusion: Analysing the caesarean section using Robson 10 group classification system helped us to identify the groups with high prevalence of CS. Various intervention can be planned to reduce primary CS such as use of partograph for labor monitoring, judicious use of oxytocin for labor augmentation, correct interpretation of CTG, promoting external cephalic version, encouraging TOLAC in women with previous caesarean.

Introduction: Caesarean section is the most commonly performed surgical procedure worldwide. It was introduced in clinical practice as a life saving procedure both for the mother and the baby. There is no dispute that caesarean sections are imperative in obstetrics but the concern is that they may be done at slightest indication. This is important especially in a low and middle-income country like India, where haemorrhage during caesarean section is the most important cause of direct maternal death.[1]

However, WHO recommended upper limit of 15% has been grossly exceeded in most of the developed countries over the last two decades.[2] The rate of caesarean deliveries in India has increased nearly sixth fold, from 2.9% percent in 1992 to 10 percent in 2005 and 17.2% percent in 2016.[3] Earlier the dictum given by Craig's was once a caesarean always a caesarean. This lead to increase in caesarean section rate especially in women with previous caesarean section. However, there is no evidence showing the benefits of caesarean delivery over vaginal delivery.

In order to propose and implement effective measures to reduce or increase CS rates where necessary, it is first essential to identify what groups of women are undergoing CS and investigate the underlying reasons for trends in different settings. This requires the use of a classification system that can best monitor and compare CS rates in a standardized, reliable, consistent and action-oriented manner. Such a classification system should be applicable internationally and useful for clinicians and public health authorities. To capture all relevant information the Robson criteria has been put forward in 2001 by Dr Michael Robson.[4] In 2015, WHO proposed the Robson classification system as a global standard tool for assessing, monitoring and comparing CS rates within the health care facilities, between different facilities, countries and regions.[5]

The Robson criteria is a 10 group classification system (RTGCS) using 10 mutually exclusive categories for caesarean section i.e. all women can be classified into only one group based on 5 obstetrics characteristic that are routinely collected in all maternities[6] (parity, gestational age, fetal presentation, onset of labor and number of fetuses). The Robson classification is simple, robust, reproducible, clinically relevant and prospective. This allows a comparison and analysis of caesarean section rates within and across groups.

Only few studies are available in literature to identify the indications and rate of caesarean section.Thus, the need of further studies to analyse caesarean section according to Robson criteria.

Method: This was a cross sectional study conducted between November 2018 to February at Lady Hardinge Medical College, Smt. Sucheta Kriplani Hospital, New Delhi. The study was

initiated after obtaining permission from the Ethics Committee of Human Research (ECHR) and participants were recruited after taking a written informed consent. It included all women who gave birth by caesarean section in Smt. Sucheta Kriplani Hospital during the study period. Women who delivered before 28 weeks of gestations were excluded from study. The data on all birth were collected retrospectively from case sheet of patient and hospital registers(labour room, maternity ward and operation theatre. For each women who underwent caesarean section data were collected on maternal age, parity, prior CS, gestational age, fetal lie and presentation, no. of fetuses, onset of labour, indications for CS, maternal and neonatal outcome. The CS rate was calculated as the number of caesarean birth divided by total number of births.

Statistical Analysis: All the data were then entered in the Microsoft excel spreadsheet and was analysed using SPSS version 23. Among the women delivered by CS proportion in various groups according to RTGCS were calculated.

Result: During the study period, the total number of birth were 17,376. There were 12,854 vaginal births and 4,522 caesarean sections, resulting in caesarean section rate of 26.02%. 4711 neonates were delivered by caesarean section including twin/triplet pregnancies. The mean age of women was 26.49±4.19. The rate of primary CS rate was 46.70%. Only 60.48% women were booked. Repeat CS was performed in 36.22%. CS was done as emergency procedure in 80.12%. Of all the groups, the maximum contribution to CS rate was from group 5 with relative contribution of 26.06%. The next contribution was by group 2 with relative contribution of 18.13%. The third contribution was to CS was from group 10 with relative contribution of 14.51%.

[MI0212]

A Quality Improvement Initiative For Reducing Hospital Length Of Stay In Rh Negative Pregnant Women Admitted For Anti-D Prophylaxis In A Tertiary Care Hospital

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Background: This quality improvement project was done at the Department of Obstetrics and Gynaecology, Lady Hardinge Medical College and SSK Hospital, New Delhi, India.

Patient group -comprised of RhD negative pregnant women with RhD positive husband blood group and patient's Indirect Coomb's test negative, who were advised Injection Anti D prophylaxis between 28 to 34 weeks of gestational age.

Problem: As a part of our hospital policy, pregnant women are advised admission for receiving prophylactic Anti D injection. These patients had a prolonged hospital length of stay (LOS) with a mean of 9 hours 40 minutes and 30% of these patients absconded due to delay in receiving discharge summary.

Aim Statement: Reducing hospital LOS of RhD negative pregnant women admitted for receiving Anti D prophylaxis from a baseline average of 9 hours 40 minutes by 50% (4 hours 50 minutes), over a period of 4 weeks.

Methods: This project was initiated in October 2019 and a team constituted. Problem was analysed using process flowchart and fish bone analysis. Issues were identified concerning patient counselling, admission timing, procurement of injection Anti-D and timely patient discharge. We planned to measure the hospital length of stay as outcome indicator.

Intervention
Strategy over first two weeks:

- All admissions for Injection Anti D were done from a fixed room in OPD
- Instructions were given to pregnant women for admission between fixed time slot from Monday to Friday

Over next two weeks

- After indent of drug, staff nurse was instructed to load the injection and hand it over to the concerned resident so that it can be immediately given to the pregnant women without any delay.
- Same resident doctor who gave injection to patient was instructed to hand over discharge paper within next 2 hours.
- The type of discharge slip was changed to a small preprinted one.

Outcome
Primary outcome: Reduction in hospital LOS of RhD negative pregnant women admitted for receiving Anti D prophylaxis

Secondary outcome:Reduction in abscond rate of pregnant women admitted for receiving Anti D prophylaxis

Measurement of improvement

- Over period of 4 weeks the mean hospital LOS reduced to 4 hours 50 minutes and abscond rate to 1.4%

Effects of changes

- Reduced hospital LOS of pregnant women admitted for Injection Anti D prophylaxis
- Patient satisfaction and improved quality of care
- Improving and reducing LOS improves financial, operational, and clinical outcomes by decreasing costs of care for a patient.
- It can also improve outcome by minimising risk of hospital-acquired conditions.

Conclusion: Following problem was encountered during the process of change:

- The concerned team of resident doctors as well as staff nurses posted in maternity ward kept on changing on rotational basis.
- These problems can be reduced by regular sensitisation of doctors and nurses to follow this protocol at the time of change of team.

Lessons learnt

- Quality improvement projects involve team work.
- Every problem should be analysed and solutions to be directed towards rectifying contributory factors by making changes in processes.

Messages for Others: LOS is one of the most important indicator of hospital performance and health care delivery as it allows optimal use of resources, with strong associations between LOS and hospital costs since it evaluates bed management.

Hospital leaders can embrace the challenge of reducing LOS to lower costs and lessen risk for its patients by adopting a systematic, data-driven, and multi-pronged approach.

[MI0213]

Simulation Based Teaching of Obstetrics & Gynaecology Skills in Undergraduate Medical Trainees: Our experience

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Introduction: With the advent of newer technologies, it has been possible to use advanced teaching methodologies like online teaching, simulation-based education, blended learning etc in healthcare. Traditional lecture and teaching in clinics, both are insufficient for acquisition of clinical skills in undergraduate(UG) medical education. Simulation based education is a new teaching strategy that has expanded globally in different specialities of health care. It has helped in bridging the gap between theory and clinical practice. However, there is paucity of Indian literature on simulation based teaching and training in undergraduate medical students.

Objective: This study attempts to explore the effectiveness and benefits of e-learning along with low fidelity simulation for obstetrics and gynaecology(OBG) skills among undergraduate medical students at a tertiary care centre in India.

Methods: This study was conducted in in SET (Skill lab, e-learning & Telemedicine) facility, All India Institute of medical Sciences, New Delhi. It was conducted in 53 eighth semester UG medical students during their clinical posting in the department of OBG. In the present study, all the students underwent a structured process of training in the SET facility involving four skill modules: Conduct of normal delivery, episiotomy repair, pelvic examination and copper T insertion. All students underwent a knowledge based pre-test with 20 items multiple choice questions. The students were then oriented to the online e-learning module. After this, the students underwent hands on training in the skill lab on manikins under the supervision of faculty. Post-test was done following the skill learning. Focused group discussion was conducted to explore the experience of the learning strategy. At the end, students also filled a feedback form based on likert scale.

Results: There was statistically significant difference between the pre-test and post-test knowledge scores of the students (p=0.004). Overall, students found this teaching strategy as useful and reported increase in self assessed confidence after hands on training. Remarkably, 100% students thought that the lectures should be completely replaced by such kind of teaching methodology. Focused group discussion revealed various themes like improved satisfaction, ability to practice repeatedly without fear of harming patients and interactive learning.

Conclusions: Simulation based education is the need of the hour for undergraduate teaching and it gives positive clinical experience to the students. The study suggests that overall the students were happier, more content and desired to include this in UGcurriculum from the first year itself. Integration of simulation based teaching in UG curriculum will facilitate greater participation of students in clinical care during UG and internship with impact not only on the overall performance in exams but also in the healthcare delivery.

[MI0214]

Evaluation of Acceptability, Safety and Continuation Rates of Centchroman as Post Abortal Contraceptive Pill

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Introduction: Postabortion contraception helps women avoid another unwanted pregnancy and risks of unsafe abortion. Centchroman is a novel non-steroidal contraceptive with strong anti-estrogenic and weak estrogenic properties. Data on centchroman in terms of acceptability and continuation rates is limited.

Objectives: To evaluate the acceptability, safety and continuation rates of centchroman as contraceptive in post abortal women at 1 month, 3 months, 6 months and 12 months.

Methods: It was a prospective cohort study. Women for spontaneous or induced first or second trimester abortion, willing to use centchroman for contraception, starting it within 7 days postabortal and willing to come for follow up were included in the study. At 1 month, 3 months, 6 months and 12 months follow up visit, women were asked about the menstrual cycles, pill intake pattern or any other side effects. Primary outcome variable were acceptability and continuation rates of centchroman. Secondary outcome variables were menstrual pattern, pill intake pattern and other side effects. Statistical analysis was done using simple parametric tests.

Results: 170 women were counselled for post abortal contraception and were offered basket of choices. 145 women volunteers chose centchroman for contraception and were included in the study. 25 women were lost to follow up. A total of 120 women were evaluated. 23.33% women had irregular menstrual cycles in 1 year follow up. The pearl index in our study was 0.83. The continuation rates of centchroman were 100%, 95.41% and 90.83% at 3, 6 and 12 month respectively. 89.16% women were satisfied and would recommend centchroman for use as a contraceptive.

Conclusion: Centchroman is safe, effective, well tolerated post abortal contraceptive pill with menstrual irregularity as the main limiting factor for its continuation.

[MI0315]

Lower Urinary Tract Symptoms in Postpartum Females and Its Relation to Mode of Delivery

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Introduction: Lower urinary tract symptoms (LUTS) is one of the various pelvic floor disorders seen in women. It is common among postpartum females and it can be socially distressing. Among the spectrum of LUTS, studies have emphasized on stress urinary incontinence (SUI) mainly. UTI comprises 1-3% of postpartum infections. This study was designed to assess the incidence of UTI in postpartum females with LUTS while also evaluating for LUTS in different modes of delivery.

Objective: To identify the incidence of LUTS in postpartum patients and the likelihood of UTI in patients showing LUTS. We also evaluated the relation of LUTS with the mode of delivery.

Methods: A longitudinal prospective cohort study of 200 postpartum females evaluated for various LUTS in the first week of the postpartum period. The participants showing LUTS were evaluated for UTI by urine culture. The prevalence of various LUTS was evaluated and the incidence of culture-positive UTI was determined amongst these females. The incidence of various LUTS was compared with the mode of delivery (spontaneous vaginal delivery, instrumental vaginal delivery, or cesarean section).

Results: Out of 200 postpartum females 48(24%) reported symptoms of LUTS, 10(5%) patients diagnosed with a growth in urine culture i.e. UTI. Patients with LUTS have 20.8% of the incidence of UTI. The mean urinary catheter duration in the postpartum period is 15.48 hours (12-48). In our study, the most common reported symptom amongst LUTS is the increased frequency (11%) followed by nocturia (6.5%), urgency (6%), burning micturition (3.5%), urge incontinence (2.5%), difficulty in passing urine (2.5%), stress incontinence (1.5%), others (0.5%) in order of decreasing frequency. Burning micturition and urgency are the LUTS significantly associated with UTI. The symptoms of LUTS were more common in postpartum females who underwent cesarean section (31.7%) than instrumental delivery (23.1%) and spontaneous vaginal delivery (14.5%). It has also been noted that women with a history of one or more previous cesarean section have a significant association with symptoms of urgency (p=0.009).

Conclusions: In our study increase in urinary frequency is the most common reported LUTS in postpartum females whereas burning micturition and urgency symptoms are significantly associated with UTI. The incidence of LUTS is more commonly reported in cesarean section mode of delivery. The women who underwent instrumental vaginal delivery reported LUTS in higher frequency as compared to spontaneous vaginal delivery.

[MI0316]

Clinical Association of Striae Gravidarum with Intraperitoneal Adhesions and Uterine Scar Thickness in Women Undergoing Repeat Cesarean Section

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Introduction: Striae gravidarum (SG) are stretch marks on the skin which develop in the mother during pregnancy. However, the etiology of SG is unknown. Cesarean section (CS) is one of the most common operation performed worldwide which carries the potential risk of serious complications due to the intra-peritoneal adhesions and thickness of previous uterine scar, such as bladder and bowel injury, infertility or chronic pelvic pain. Therefore, it is imperative to predict adhesions and uterine scar thickness in order to take necessary preoperative measures to prevent possible complications.

Aim: To find the clinical association of striae gravidarum in predicting intra-peritoneal adhesions and uterine scar thickness in women undergoing repeated caesarean delivery.

Material and Methods: It was a cross-sectional study done over a period of 18 months duration. One hundred women with previous cesarean section scheduled for elective LSCS and selected as per the inclusion and exclusion criteria, and willing to participate were enrolled for the study. Striae gravidarum was calculated according to the Atwal numerical scoring system. During elective caesarean section, intra-operatively, presence of intra-peritoneal adhesions were looked for and graded according to modified Nair scoring system. After extraction of baby and before closing, the thickness of lower uterine segment at midpoint of lower flap of uterine incision was measured by metallic screw gauge. The data obtained was statistically analyzed.

Results: Striae gravidarum was present in mild degree in the majority (60%) of patients. Significant positive correlation was seen between striae gravidarum and intra-peritoneal adhesions. A negative association was established between striae gravidarum severity and thickness of LUS. A significantly higher anaesthesia induction-to-delivery interval was seen in subjects with Nair score of more than Grade 3, that is, 61min in Grade 4 IPA and 45min in Grade 3 IPA, whereas lower anaesthesia induction-to-delivery interval of less than 30min was observed in women with IPA less than Grade 3. Thus, a significant positive correlation was established between them. Owing to its high sensitivity and low specificity in predicting IPA Grade 3 or 4 (Sensitivity-73.3%; Specificity-37.6%) and LUS scar thickness<3.74mm (Sensitivity-71.4%; Specificity-40%), striae gravidarum cannot be used as a diagnostic indicator for predicting the same, but can be a useful mass screening method.

Conclusion: Striae gravidarum can be considered as a useful predictor of unforeseeable intraoperative complications such as intraperitoneal adhesions, LUS thickness, requirement of blood transfusion, risk of bladder-bowel injury and chances of NICU admission of neonate or HDU admission of mother. Scoring the SG in a patient preoperatively will attribute to better anticipation and preparedness for the above mentioned complications, leading to better management of the patient, especially in terms of arranging adequate blood products, surgeon with adequate expertise, arrangement of NICU/HDU bed preoperatively. Striae gravidarum scoring is a zero-cost simple quick and easy technique which can be universally used with very minimal intra-observer variation to predict grave intraoperative complications, thereby reducing maternal and neonatal morbidity and mortality.

[MI0317]

Restructuring Fetal Medicine Services in a Low Resource Setting During The Covid-19 Pandemic: Experience from a tertiary care fetal medicine centre

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Introduction: The COVID-19 pandemic has presented a number of challenges in the delivery of health care services, including prenatal care. Providing ideal care to a pregnant woman has becomemore difficult as the routine laboratories and ultrasonography facilities may be suspended. An important aspect of prenatal care, screening for genetic diseases also presents unique challenge in these times. Moreover, due to

reallocation of manpower and resources, fetal diagnostic and/or therapeutic interventions may not be performed routinely or given due importance, this will have a serious bearing on the pregnant woman and may adversely affect the neonatal outcome.

Objective: Streamlining and maintaining continuity of care of fetal medicine services during the COVID-19 pandemic.

Methods: We formulated a step wise approach to streamline the fetal interventions during the lockdown period. First a standard operating procedure was made and screening for COVID-19 symptoms was done prior to procedure. Training of personnel and strengthening of infection prevention measures was done. Necessary modifications required while performing ultrasound and/or various fetal interventions in order to not only provide best possible care to a pregnant woman and but also, minimizing the exposure related risk to health care personnel.

Results: 51 patients underwent invasive prenatal diagnostic and therapeutic procedures at our fetal medicine centre during the lockdown period during COVID-19 pandemic. Out of 51 patients who underwent the procedure, three belonged to containment areas and were advised pre-procedure testing for COVID-19 following which the invasive procedure were carried out. None of the patients we encountered were COVID positive. Restructuring and reorganization of fetal medicine facility in the COVID-19 pandemic enabled us to provide uninterrupted services during this stressful period too.

Conclusion: Provision of such services should be in accordance with institutional policies, and national guidelines, always keeping in mind the available health care personnel and resources in developing countries.

[MI0318]

Improving Compliance For ERAS-CD at A Tertiary Care Centre in India: A Quality improvement initiative

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Introduction: ERAS-CD (Enhanced recovery after surgery-caesarean delivery) is a collection of evidence-based practices of peri-operative care employed to accelerate patient recovery, improve satisfaction and reduce post-operative complications. The core principles of ERAS-CD protocols addresses the reasons which delay patient recovery. The majority of women undergoing caesarean are young and healthy with potential for rapid recovery. Good compliance with ERAS-CD protocol has a potential to reduce burden on health care resources and antibiotic resistance.

Objectives: To improve the compliance for ERAS-CD protocol in eligible women from current baseline to 90% in a tertiary care center in India within 4 weeks time.

Methods: Quality improvement study

Procedure: A team of faculty, senior junior residents and nurses analyzed the reason for poor compliance to ERAS-CD protocol by process flow mapping and fish bone analysis and found that the average compliance to protocol was 23% and the reason for poor compliance were less awareness, no departmental policy and lack of motivation among health care workers (HCW). Various change ideas were tested through sequential Plan-Do- Study- Act (PDSA) cycles. In PDSA cycle 1 a departmental policy was made to implement ERAS-CD protocol in all eligible primigravida low risk women undergoing caesarean section and sensitization of health care workers was done for ERAS-CD protocol.

In PDSA cycle 2 sensitization of patient's relatives and regular reinforcement of HCW was done on routine basis.

Outcome Measure:

Percentage of eligible women who underwent early discharge within 72 hours

Percentage of eligible women requiring re-admission

Percentage of eligible women who developed SSI(surgical site infection)

Results: After implementation of PDSA cycle 1 the average compliance rate in eligible women was68.5% from the baseline within 1 week time.

This is an ongoing QI project and the results of PDSA 2 are awaited.

There was significant improvement for compliance to single shot intra-operative antibiotics while compliance was low for light meal 6 hours prior to surgery. There was no significant increase in re-admission rate and incidence of SSI.

Conclusion: A QI approach was able to accomplish sustained improvement compliance to ERAS-CD protocol.

[MI0319]

Reproductive Health and Domestic Violence in Era of COVID-19

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Introduction: The great challenges faced during COVID-19 pandemic has resulted in issues such as restricted mobility, emotional stress, intimate partner violence, overall impacting female sexual and contraceptive behaviour.

Objective: To assess changes in reproductive health and to identify the incidence of domestic violence and social discrimination in reproductive age group women which have been affected with COVID-19 as well as health care providers working at Lok Nayak Hospital.

Materials and Methods: A cross-sectional study was carried out using a questionnaire regardingreproductive health, domestic violence and social discrimination. A total of 86 women of reproductive age group, affected with COVID-19 along with Health Care providers working at COVID-19 care facility were included in the study. After obtaining a written consent, patients were interviewed telephonically and as for Health care workers, the data was collected through a similar online survey and analysed.

Results: In the present study 86 women were questioned, among which 36 were healthcare workers and 50 were patients. During the Covid-19 pandemic 39.1% of participants reported changes in their menstrual cycle, most common

being irregular type (11%) followed by delay in menstrual cycle (9.8%). Disturbances in physical and emotional health such as disturbance in sleep cycle (50%), weight changes (37.7%), were reported by 68.6% participants. These pertained to the stress of staying away from family and working in high risk areas. Majority participants employed music, exercise and meditation as coping mechanisms. In addition, 35% of the participants complained of pre-menstrual syndrome symptoms getting worse during pandemic, impacting their daily activities. Amongst the married, 11 reported increased confrontations with partner, 13 notified increased sex drive, 17 were hesitant to conceive due to economic concerns and 24 used barrier method for contraception.

Out of 86 participants, 28 women suffered from domestic violence. The prevalence was much higher in nuclear family and households with economic burden. Women from the literate class were more comfortable in communicating and seeking help. Such an event had occurred for the first time during COVID-19 for 61.8% women, while 38.2% reported an increase since the lockdown. The survey showed, husbands were the chief offender, physical assault had a frequency of 22.4%, higher than emotional violence. Majority women (20) tried seeking help from family member (50%) followed by professionals/ helplines (40.9%) and friends (22.7%). Most COVID-19 patients as well as Health care providers felt stigmatised because of the COVID positive status leading to great deal of social discrimination.

Conclusions: COVID-19 has had broad impacts on woman's reproductive health with a surge of domestic violence cases since the mandatory lockdown. The National Commission of Women reported that the domestic violence cases doubled since the lockdown. Greater social awareness, adequate data collection, improved surveillance and providing the necessary help should become of importance in such times.

[MI0320]

Clinical Correlation of Vitamin D Deficiency in Pregnancy with Covid-19: A pilot study

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Introduction: Vitamin D has important regulatory effects on immune response, expression of genes involved in cytokine pathway, in supporting normal lung function and its response to lipopolysaccharide infections. 5-hydroxyvitamin D supports induction of antimicrobial peptides in response to both viral and bacterial stimuli, suggesting a potential mechanism by which Vitamin D inducible protection against respiratory pathogens might be mediated. Calcitriol also regulates the expression of ACE-2 receptors which are mediators for SARS-CoV-2 infections. In this studywe correlated Vitamin D levels in pregnant patients with COVID-19 infectionoutcome.

Objective: To study the status of Vitamin D levels in pregnant patients with COVID-19 infection & it's clinical correlation with disease outcome.

Sample size: 50 antenatal COVID positive patients were recruited for study.

Material & Methods: This observational study was conducted at a tertiary COVID dedicated hospital over a period of 2 months. Serum Vitamin D levels were measured for pregnant women presenting with COVID-19 infection. Women with vitamin D level <30ng/ml were enrolled in the study after obtaining an informed writtenconsent. Their demographic, obstetric & clinical parameters were analyzed.

Results: Mean age of study subjects was 27 yrs. Majority patients were primi & 2nd gravida (60%), while primi parity was most common (57%). Prevalence of Vitamin D deficiency was 92% in study subjects (at cutoff value <30 ng/ml).There was no significant difference in the clinical presentation among patients with normal Vitamin D and in those who had deficiency($p<0.05$). No significant difference was observed in biochemical parameters among patients with normal Vitamin D and in those with Vitamin D deficiency. Mean Vitamin D level of study population was 16.2 ng/ml. Mean duration of COVID positivity was 11.3 days for patients with Vitamin D<30 ng/ml & 13.5 days for patients with Vitamin D >30 ng/ml. There was no significant difference in the outcome of disease among patients with normal Vitamin D and in those who had deficiency($p<0.05$).

Discussion: Prevalence of Vitamin D deficiency was 92% in pregnant COVID patients as compared to 85% prevalence in normal pregnant females as reported in previous studies[1] on north Indian population suggesting a slightly increased prevalence in COVID positive patients. No significant difference was observed in clinical progression, biochemical parameters & duration of COVID positive period between patients with normal Vitamin D levels & those with Vitamin D deficiency, the limiting factor being small study population.

Conclusion: Circumstantial evidence support link between Serum Vitamin D levels & COVID-19 infection in pregnancy. This is similar to studies[2] conducted on non-pregnant patients with Vitamin D deficiency. In this study we did not found any significant association between Vitamin D levels & progression of COVID-19. Further studies on larger population of Vitamin D deficient pregnant patients with COVID-19 are required to generate evidence.

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[MI0321]

A Study on Psychological Impact of Covid-19 Disease in Covid Positive Pregnant and Non Pregnant Women

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Introduction: The severe outbreak of novel corona virus disease (COVID 19) which was first reported in Wuhan, China and rapidly spread to other countries in short period of time. This pandemic has challenged humankind in various ways. One such important

area is mental health issues in patients undergoing treatment.

Objectives: To study the psychological impact of COVID 19 disease in COVID positive pregnant, post partum, non pregnant women and their primary healthcare giver.

Methods: This is a cross sectional study conducted on 150 COVID 19 positive pregnant, post partumand non pregnant women and their primary health care giver admitted in COVID ward. After taking the consent telephonically, the assessment was done with self administered questionnaire and the audio clips were recorded. Their demographic profile, clinical features were also studied. The mental health was studied with the help of twoscoring systems: General Health questionnaire (GHQ) and Visual analogue score (VAS). This GHQ questionnaire assesses four areas: Somatic symptoms, Anxiety and insomnia, social dysfunction and severe depression. Visual Analogue Score was used for assessment of insomnia The severity of the psychological impact would depend on the score achieved in four parameters and measured on likert'scale. In pregnant women, additional factors like stress due to fear of congenital anomaly in baby due to COVID positive, fear of transmission of disease with breast feeding were also studied. The need for psychological care/ counselling was assessed in all patients.

Results: The psychological impact in the form of somatic symptoms, social dysfunction and insomnia were more in the pregnant and post partum women and their health care givers than nonpregnant women group when statistically analysed. Psychological impact was found to be the same when analysed in patients with symptoms and those without symptoms. The psychological impact was also found to be same in all socioeconomic groups. Need for psychological counselling was found more in pregnant and postpartum group.

Conclusion: COVID 19 disease have profound psychological impact on patients as well as on their health care givers. Regular psychological counselling in patients and their health care givers can be an important step in combating the psychological impact.

[MI0422]

Meditation & Yoga in Pregnancy: Maternal & Fetal Impact

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Aim: To determine the effect of prenatal yoga and meditation on obstetric and fetal outcome.

Material & Methods: This was a prospective randomised trial conducted over 6 months. 60 primigravida with a singleton, low risk pregnancy between 18-26 weeks were equally divided into two groups (interventional and control). The interventional group undertook meditation and yoga sessions of 30 min twice a week till delivery. Obstetric outcomes including gestational age, antepartum & intrapartum complications, cord blood cortisol levels and neonatal outcomes were recorded.

Results: PIH developed in the antepartum period in 2 women in the control group as compared to 1 case in the study group. 7 women developed fetal growth restriction and 13 delivered post-dated as compared to 1 and 3 respectively in interventional group. 21 women in the study group went into spontaneous labour and only 4 were induced as compared to 17 and 8 in the control group. Cord blood cortisol levels were higher than 10 ng/ml in 16 women in the control group compared to 7 in the group who performed yoga and meditation. 11 neonates in control group had low birth weight as compared to only 7 in the interventional group. No child in the interventional group required nursery admission and there was no neonatal mortality.

Conclusion: Maternal stress increases cord blood cortisol levels and meditation and yoga during pregnancy can help relieve the prenatal stress and improve maternal and fetal outcomes.

[MI0423]

Knowledge, Attitude and Practices Among Pregnant Females Regarding Oral Health

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Introduction: In developing countries like India, oral check-up and care is not considered as an essential part of routine antenatal care. Periodontal disease provides a portal for hematogenous dissemination of oral microorganisms to reach feto-placental unit which could be an independent risk factor for pre-term and low birth weight babies.

Aim: To determine knowledge, attitudeand practices oforal hygieneamong pregnant women.

Material & Methods: 132 pregnant women attending antenatal OPDof Babu Jagjivanram Memorial Hospitalwere interviewed to evaluate their knowledge, attitude and practices regarding oral health. After taking informed consent, a self structured questionnaire comprising of 25 questions was filled by attending health care worker and data was analyzed.

Results: Out of 132 women,129 women cleaned their teeth regularly. 107(81%) women used toothbrush for cleaning and 64(48.4%) women used to brush only once daily. 41% of the women devoted 2 to 3 minutes for brushing their teeth. Usage of dental floss was seen in 86% women. 72 (54.5%) women were aware of consequences of infrequent brushing. Awareness between oral health and pregnancy outcome was seen only in 13% patients. 63 (47%) patients had been for a dental checkup in antenatal period.

Conclusion: Educating and motivating antenatal women to maintain good oral hygiene and providing routine dental checkup can ease burden of oral diseases not only in mothers but can also reduce impact of periodontal diseases in newborn.

[MI0424]

Maternal Serum Copper and Zinc Levels in Pregnant Women with Congenitally Malformed Fetus

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Introduction: Congenital anomalies are the structural or functional anomalies (metabolic disorders) that occur during intrauterine life and can be identified prenatally, at birth, or later in infancy. Global birth prevalence is 2-3%. Prevalence in Indian maternal cohort is 168.44 per 10,000 live births. Etiology is multifactorial. 50% of congenital anomalies are still of unknown origin. Levels of serum

trace elements is an important indicator of maternal nutritional status during pregnancy.Trace elements related with adverse outcomes mainly includes copper, zinc, calcium, magnesium, iron. Zn plays an important role in many cellular reactions,transcription, nucleic acid metabolism, role in coenzymes, cell division and differentiation. Zn deficiency during the pregnancy may leads to folate deficiency as well which may result in neural tube defects (NTDs) and other disorders. This explains that Zn and folate are related to the closure of human neural tube and thus, deficiency of these may be associated with NTDs.

Various mechanisms which may be responsible for Cu deficiency includelow maternal dietary copper intake, disease-induced or drug-induced changes in maternal and conceptus copper metabolism. Majority of copper exists as ceruloplasmin and its main function is to protect cells from the toxic superoxide anion thereby, ensures fetal growth and immune function. Cu deficiency are prone to preterm delivery, premature rupture of membranes and fetal nervous system damage.

Objective: To estimate maternal Serum Copper and Zinc levels in pregnant women with congenitally malformed Fetus.

Methods: Study was a case-control observational study which was carried out on 200 pregnant women who attended the department of Obstetrics and Gynaecology during one year period at Pt. B. D. Sharma PGIMS, Rohtak. 6ml of venous blood was collected in red vaccutainers at the time of inclusion of women in the study group, allowed to clot at room temperature for 30 minutes and serum was separated by centrifugation at 3000 rpm for 10 minutes, stored at -20ºc till analysis. Samples analyzed for zinc and copper levels in µg/dl using colorimetric kits. Results expressed as mean values and standard deviations and by using unpaired Student t-test and Chi-square test. A p value of <0.05 was considered as significant. SPSS version 21.0 was used.

Results: Zinc and copper level were significantly lower in study group as compared to control group (Zinc:- Study vs. Control Group: 51.8±19.6µg/dlvs. 152.5±16µg/dl; p < 0.0001 and Copper: Study vs. Control Group : 110.3±23.9µg/dlvs. 208.6±29.6µg/dl; p < 0.0001). After statistical analysis, the difference among both the groups were found to be significant (p <0.001).

Conclusion: Serum Zinc levels and Serum Copper levels were found to be significantly lower in the study group as compared to the control group. Therefore, it can be suggested that screening for Zinc and Copper levels should be done in pregnancy for better insight in the etiology of congenital malformations.

[MI0425]

Use of Sequential Regimen (Prostaglandin E1 Following Failure Of Prostaglandin E2 Gel) for Labour Induction: A retrospective observational study

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Objective: To assess the efficacy and safety of use of prostaglandin E1 vaginal tablet after failure of prostaglandin E2 gel for induction of labour in term pregnancies with singleton fetus in vertex presentation.

Main Outcome: Comparison of vaginal delivery rates with full dose of PGE2 gel and both PGE2 gel and PGE1 tablets and whether the increase in vaginal delivery rates is significant.

Methods: This was an observational hospital based pilot study conducted over a 12 month period (Jan 2019- Dec 2019). Women without previous cesarean or myomectomy and who failed to go into labour with three doses of Prostaglandin E2 gel were included in the study.

Women with leaking during induction with PGE2 gel, hypertension or diabetes, severely growth retarded babies and those with suspicious CTG were excluded. Women who failed to go into labour with three doses of PGE2 gel were given rest and reinducedwith vaginal PGE1 tablets, with maximum of 5 doses of 25ug. Success of regimen was taken as successful vaginal delivery.

Statistical Analysis: Data was entered in microsoft excel sheet. The means of proportion and Chi square tests were used to analyze the significance. P value<0.05 was taken as significant.

Results: A total of 2256 women delivered in 2019. Out of those women, 516 had a cesarean delivery and 627 women had inductions which accounted for an overall cesarean rate of 22.87% and induction rates in women meant to go in labour at 30.8%.

Of the 296 women, 255 were induced with PGE2 and 41 with sequential regimen. The vaginal delivery rate was 36.9%, 56.44% and 73.01% after one, two and three doses of PGE2. The vaginal delivery rates increased to around 81% with sequential induction, which was found to be significant (p<0.05). Women with higher BMI have been found to need Sequential induction more often, which is again significant. The babies of sequential induction were also found to be significantly heavier that those induced with PGE2 alone.

Perinatal Outcomes: In the PGE2 group, there was one stillbirth (Acute abruption in IUGR baby), 6 babies with poor apgar and a total of 22 nursery admissions (7.38% of babies) for >24 and <72 hours duration. In the sequential group, there was one neonatal death at 4th day (septicemia) and 2 babies with poor apgar and 3 nursery admissions (7.31%) for the same duration. So no increased morbidity/ mortality was observed between the two groups.

Discussion: Their sequential use of induction methods has been mentioned in a number of guidelines for IOL. There are no studies in sequential use of PGE2 and PGE1, but there have been studies on sequential use of balloon catheter and PGE2 or balloon catheter and PGE1.

This is the first such study in India to demonstrate the safety and efficacy of Sequential induction with prostaglandins. The increase in vaginal deliveries is significant without any change in fetomaternal morbidity or mortality. An in depth analysis has been done on different PGE2 and different PGE1 doses and their corelation to the success outcome. This study on a wider population will also have a significant influence on increasing vaginal delivery rates and reducing cesarean rates

Conclusion: This study saw a significant increase in vaginal delivery rates in women who failed to go in labour with PGE2

intracervical gels with no effect on fetomaternal outcome. The vaginal delivery rates increased from 73% to 81%. Almost 56% of the women who attempted sequential induction delivered vaginally. A wider study will throw more light on the success rates in different Robsons groups, so that a better streamlining of induction can be done in selected patients.

[MI0426]

Evaluating The Efficacy of Covid-19 Screening Questionnaire for Labour Room and Ward Admissions in the Pandemic Era

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Introduction: COVID 19 pandemic has emerged as a great health sector challenge owing to its high secondary attack rate and presence of asymptomatic carriers. A screening system to filter the the patients at risk of underlying infection prior to admission in a hospital setup not only limits exposure but also curbs the chain of spread.

Objective: To evaluate the effects of a self-developed, institution approved COVID 19 screening questionnaire on the labour room and ward admissions.

Methods: The questionnaire included 7 questions evaluating symptoms, travel history, exposure to confirmed/ suspected COVID 19 case, prior visit or admission to any hospital and habitation in COVID 19 hotspots. Duration of study was from April 2020 to September 2020

All patients who required admission were evaluated using the screening questionnaire. From April 2020 to May 2020 only patients who screened positive were subjected to COVID RTPCR or CBNAAT testing. From June 2020 universal testing for COVID 19 was done for all patients requiring admission despite screening results, as per institute Protocol.

Results: We evaluated the sensitivity of screening questionnaire over time. From April to May 2020, a total of 382 patients required admission out of which 16 were screen positive. All 16 underwent COVID testing, 25 % (4/16) of which had positive and 75 % had negative test results. 7 screen negative patients underwent COVID 19 testing when they developed symptoms and tested positive.

From June 2020 to September 2020, 802 patients required admission and all underwent COVID 19 testing, out of this 43 were screen positive. 51 tested positive for COVID 19. Around 6.9 % (3/43) of screen positive patients tested positive for COVID 19, rest 93.1 % were false screen positives. 48 patients were false negatives in screening.

Sensitivity and positive predictive value (PPV) of the screening questionnaire over 6 months (April to September) were 11.3 % and 11.8% respectively. As compared to this, interim analysis revealed that the screening questionnaire's sensitivity and PPV were 33.4% and 36.8 % respectively when data from April and May alone was analyzed.

Conclusion: Screening questionnaire has a slightly better sensitivity for triaging COVID 19 patients only when the disease prevalence in community is less.

Universal screening of all patients for SARS- Coronavirus infection, who need admission in a non- COVID designated area reduces the disease exposure of HCWs and allows proper management of the high risk cases.

[MI0428]

Association of Body Mass Index with Gestational Diabetes Mellitus: A prospective cohort study

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Introduction: India is considered as a 'diabetes capital' of the world. The incidence of gestational diabetes mellitus (GDM) has doubled over the past few years and is coinciding with the obesity pandemic.

Objective: The objective ofthis study is to examine the association between body mass index (BMI) and GDM in women seeking antenatal care at a tertiary care hospital of Western Rajasthan.

Methods: Out of 200 recruited women, 183 women completed the follow-up. The BMI was recorded according to World Health Organization (WHO) standards and GDM was diagnosed based on the International Association of the Diabetes in Pregnancy Study Group (IADPSG) criteria. Logistic regression was used to calculate the odds ratio (ORs) and 95% confidence intervals (CIs) for the association between BMI and GDM and other predictors of GDM.

Results: The incidence of GDM was 36.06% in the present study. The proportion of women with BMI ≥25 kg/m^2 who developed GDM was 47.6%. Multiple logistic regression model showed BMI (adjusted odds ratio [AOR]:1.074, P = 0.048), age >25 years (AOR: 2.292, P=0.025), and history of GDM in previous pregnancy (AOR: 10.267, P = 0.001) to be independent risk factors of GDM.

Conclusion: A high incidence of GDM was noted in the study population and body mass index ≥25 kg/m^2 has a significant association with the development of gestational diabetes mellitus. However, the strongest association was found with the previous history of GDM. Further, it also emphasized the importance of early diagnosis and optimum sugar control in mitigating maternal and neonatal complications in GDM.

[MI0529]

To Study Maternal and Fetal Outcome in Nulliparous Women Undergoing Induction of Labor Between 39+ to 41+ Weeks of Gestation

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Introduction: Induction of labour refers to the artificial initiationof labour undertaken when the benefits of delivery are deemed to outweigh the risk of awaiting spontaneous onset

of labour.[1-2] It is common obstetrics intervention that precedes 20% of all birth.[3] In high risk pregnancies, the balance starts to shifts in favour of delivery between 37 to 38 weeks of gestation, the optimal timing of delivery in low risk pregnancies is still not clear. Although induction of labour has been criticized for an associated increased risk of cesarean delivery, recent studies have shown that there are fewer cesarean deliveries with induction than without it.

Aims and Objectives: To study Maternal and fetal outcome in nulliparous women undergoing induction of labor between 39^{+} to 41^{+} weeks of gestation

Materials and Method: We evaluated a total of 90 nulliparous low risk women at 39+ and beyond.Written informed consent was taken from the pregnant women willing for enrollment in the study.

Groups	Gestational age(weeks)
I	39^{+} to 39^{+6}
II	40^{+} to 40^{+6}
III	41^{+}

The method of induction will depend on the Bishop's score. If the Bishop's score is <6, intracervical "Dinoprostone" gel 0.5mg (cerviprime) were planned for cervical ripening every 6 hour for total of 3 doses and oxytocin infusion was given. The dose was titrated as per the hospital protocol. If after 3 doses of dinoprostone and oxytocin infusion for 12 hours, the patient did not go in active labor (cervical dilation more than 5cm with adequate uterine contraction) was considered as failed induction. Maternal and Fetal monitoring was done. The patients were observed for the duration of labor. The maternal and neonatal outcome variables were recorded till the patients were discharged from the hospital.

Result: A total of 90 patients were recruited, Pre-induction Bishop's score was assessed in all patients. Eighty six percent patients (26/30) delivered vaginal delivery and only 4 patients required Caesarean section (13.3%) in Group I. In both the Groups II and Group III 66.7% (20/30) patients in each underwent caesarean section. Only 10/30 patients (33.3%) in each later groups had successful vaginal delivery. No neonatal complications was seen in babies of Group I whereas 19/30 babies (63.3%) of patients inGroup II and 20/30 (66.7%) babies in Group III were admitted in the NICU which was statistically significant with a p value < 0.001.

Conclusion: At 39 weeks of gestation, induction and delivery is associated with lower caesarean rates and maternal and neonatal morbidity than those who were expectantly treated.

[MI0530]

Comparison of Prophylactic Tranexamic Acid Versus Misoprostol for Control of Bleeding in Cesarean Section

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Introduction: There has been an increasing incidence of cesarean sections in India, which inturn has caused a rise in the incidence of postpartum hemorrhage (PPH). There has been an increase in interest on the role of misoprostol and tranexamic acid (TXA) in preventing and managing PPH during lower segment cesarean section (LSCS). However, the lack of sufficient published study comparing the efficacies of these drugs prompted us to conduct this study.

Objective: Comparison of efficacy of prophylactic Tranexamic acid (1 gm IV) versus Misoprostol(400 mcg sublingual) for control of bleeding in cesarean deliveries.

Methods: A total of 180 low risk pregnant patients with singleton pregnancy at ≥ 37 weeks undergoing emergency/elective LSCS were into 3 groups comprising of 60 women in each group. All the 3 groups received 10 U oxytocin IV infusion at the time of cord clamping as per the hospital protocol. In addition to oxytocin, one group was given 1gm IV tranexamic acid and the other group received 400 mcg of misoprostol sublingually at the time of cord clamping. The blood loss in the patients were observed in the three groups by gravimetric method, 24 hours postoperative Hb and hematocrit measurement. Need for more uterotonics, blood transfusion, and adverse effects of drugs was assessed.

Results: Out of the 180 patients included in the study 163 women (90.56%) underwent emergency cesarean section. The most common indication of the LSCS was fetal distress (45.56%),while transverse lie was the least common indication (2.78%). The mean blood loss was significantly more in control group (oxytocin only, 643.12 ± 33.43ml) compared to both tranexamic acid (493.47 ± 33.69 ml) and misoprostol groups (495.46 ± 30.47ml). Whereas, there was no significant difference between tranexamic acid group and misoprostol group. The associated side effects were much more in misoprostol group (50%), while tranexamic acid significantly reduced the need for additional uterotonics.

Conclusion: Tranexamic acid can be routinely used after cord clamping along with oxytocin in patients undergoing elective/emergency LSCS to reduce perioperative blood loss as tranexamic acid has been found to be comparable to misoprostol; both of which were better than oxytocin alone. Tranexamic acid having the added advantage of having lesser side effects. It is recommended to investigate the effects of both drugs in future studies with a larger sample size to have better knowledge to curb incidence of PPH in future.

[MI0531]

Effect of Preoperative Vaginal Cleansing on Post Cesarean Infectious Morbidity: A Randomized Comparative Study

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Introduction: Post cesarean infectious morbidity is one of the important complications of cesarean and is usually, caused by ascending infection from vagina. Vaginal preparation with antiseptic solution may reduce bacterial load which may help in decreasing post-operative infection.

Objective: To study the role of preoperative vaginal cleansing using cetrimide and chlorhexidine solution before cesarean section on post cesarean infectious morbidity.

Methods: An interventional and prospective randomized comparative study was conducted from October 2018 to March 2020. The patientswhomet the inclusion criteria and gave informed consent were recruited in the study and randomization was done into intervention (cases) and control group by block randomization method.

Among 760 women, 380 were in the intervention group and 380 were controls. Women in intervention groupreceivedpre-operative vaginal cleansing with a solution of chlorhexidene and cetrimide. Both groups were followed in the post-operative period till they were discharged for presence of any infectious morbidity.

Results: Both the cases and controls were comparable in age, BMI, gestational age, parity and hemoglobin percentage.

There was statistically significant reduction in the rate of post cesarean febrile morbidity and wound sepsis with a p value of 0.017 and 0.02 respectively. The rate of endometritisthough lower in the intervention groupwasnot statistically significant (p value 0.054).Rate of early neonatal sepsis and mean duration of hospital stay was reduced but the reduction was not significant.

Conclusion: Pre-operative vaginal cleansing before cesarean section can reduce the infectious morbidity in the post-operative period.

[MI0532]

Changing Trends of Caesarean Section Using Robson Criteria in a Tertiary Level Hospital

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Introduction: WHO proposed use of the Robson Ten group classification system (TGCS) for assessing, monitoring and comparing caesarean section rate between and within healthcare facilities.

Objective: This study was conducted at tertiary level hospital to compare the changing trends of caesarean section using Robson's criteria in study population.

Methods: This observational comparative study conducted at tertiary level hospital and included study group A – 300 women delivered by caesarean section from 1 NOVEMBER 2018 – 1 NOVEMBER 2019 and study group B – 300 women delivered by caesarean section from 1 NOVEMBER 2015 – 31 DECEMBER 2016. All eligible women were classified according to Robson criteria to determine relative and absolute contribution made by each group to the overall caesarean section rate.

Results: In this study, the caesarean section rate in group A was 29.32% and group B was 28.03%. Group 2, 5, 1, 10made the most significant contributionsto overall caesarean section rate in both study group were69.67% in study group A and 76.00% in study group B to overall caesarean section.

Conclusion: Robson's groups 2, 5, 1 were major contributors of overall caesarean section rate in study group A and 2, 5,10 in study group B. There is need to reduce overall caesarean rate by reducing caesarean section in these groups in our institution.

Keywords: caesarean section; Robson criteria

[MI0533]

Impact of Covid-19 Pandemic on Mental Health and Quality of Life Among Health Care Workers

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Introduction: COVID-19 Pandemic is considered as the the most crucial global health calamity of the century and the greatest challenge mankind has faced since world war II. The impact of this pandemic has been observed in most of the countries of the world. A multitude of adverse physical, mental and psychosomatic problems have been noted across the globe. One such under recognized and unaddressed area is the mental health issues faced by the health care workers during this pandemic.

Objectives: To assess the mental health of health care workers during COVID-19 Pandemic and find out its impact on their quality of life.

Study Design: The present study was an interdepartmental project carried out by the department of obstetrics and gynecology in collaboration with the department of Psychiatry, at a Medical College. This was a questionnaire based, cross sectional study, carried out from 1st April 2020 till 31st July 2020. Prior permission had been taken from the institutional ethical committee. Subjects were recruited after informed consent, from the health care workers, working in COVID-19 hospitals including doctors, nursing staff, paramedical and housekeeping personnel. People suffering from any type of mental disorders were excluded from the study. The questionnaire was taken from DASS-21 and WHO-5 after prior permission for the same. Both are standardised and validated questionnaires.

Result: A total of 145 health care workers participated in the study with 60% females and 40% males. 90% of the participants reported significant stress levels with 72% having depression and 85% having anxiety.

Conclusion: High levels of anxiety, stress and depression were found among health care workers. Quality of life was found significantly affected in the health care personnel directly posted in COVID.

[MI0535]

Curious Case of Von Wyk Grumbach Syndrome

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A 4-year female presented to the emergency with 4 days of bleeding p/v with no h/o trauma or sexual assault. O/E child had global developmental delay with short stature, and general physical features s/o congenital hypothyroidism with Tanner stage 1. She had bradycardia with relatively high TSH levels, with low T3 and T4 levels and elevated anti TPO antibodies confirming autoimmune primary hypothyroidism. Basal FSH raised with normal LH and prolactin levels. On X Ray epiphyseal dysgenesis was seen, bone age was delayed for age (12 months).

CECT abdomen and pelvis was sought and s/o B/L adnexal mass (multiloculated cystic) with mild ascites. Bleeding p/v postulated to be due to precocious puberty. CE-MRI brain was sought and s/o ? pituitary hyperplasia with left temporal nodular granular NCC. Patient was discharged in stable condition after diagnosed as Von Wyk Grumbach (triad of precocious puberty, ovarian cyst and hypothyroidism).

[MI0536]

The Phenotypic Diversity in Insulin Resistance, Body Mass Index, Serum Anti-Mullerian Hormone and Per Follicle Anti-Mullerian Hormone Among Infertile Polycystic Ovary Syndrome Patients- An observational study

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Introduction: Polycystic ovary syndrome (PCOS) is the most common cause of anovulatory infertility. Insulin resistance (IR) and high AMH levels have been associated with severity of PCOS though these are not included in diagnostic Rotterdam criteria.

Aims and Objectives: To study the prevalence of PCOS phenotypes in our population and also to evaluate the phenotypic diversity of BMI, IR, serum AMH and per follicle AMH levels among infertile PCOS women.

Material and Methods: This was an observational study of 174 infertile PCOS (Classified according to Rotterdam criteria) women who attended the infertility clinic between Jan 2018 to Dec 2019InfertilePCOSwomen were grouped according to phenotype: phenotype A (OA +PCOM+HA), phenotype B (OA+HA), phenotype C (PCOM+HA), phenotype D (OA+PCOM). HOMA-IR, BMI, AMH and AMH/AFC ratio were measured across different phenotype. We used serum AMH to antral follicle count ratio (AMH/AFC) as a marker of per follicle AMH production. Insulinresistance was assessed using Homeostatic Model Assessment of Insulin Resistance (HOMA-IR) with a cut off >2.5 as IR.

Results: Out of 174, 55.1% (96/174) in our cohort belonged to phenotype A or the classical phenotype with all three features of Rotterdam criteria, 6.89% (12/174) in phenotype B, 12% (21/174) in phenotype C and 25.8% (45/174) in phenotype D.Insulin resistance was present in 69.5%(121/174) subjects of which 62.8% (76/121) belonged to phenotype A. There was no difference in mean HOMA IR in different phenotype categories (p=0.126). Mean BMI in all phenotypes was > 25 kg/m^2 and the highest was seen in phenotype B (26.04 ±3.84). More than half i.e. 59.1%(103/174) patients were either overweight or obese. No statistical difference seen as per BMI category in different phenotype. Mean AMH was significantly higher in phenotype A [14.23± 5.9ng/ml] as compared to C (p=0.040) and D (p=.011) phenotype. Mean AMH/AFC ratio (.58 ± .36) was significantly higher in phenotype A as compared to D (.42 ± .18) (p=.016). Thus, there is heterogeneity in AMH levels and per follicle AMH level in different PCOS phenotypes with the highest levels in classical phenotype. There is however no correlation of IR and BMI in the different phenotype groups and further investigation is needed to characterize its role in phenotypic classification.

Conclusion: The prevalence of the four phenotypes varies in different ethnic groups but the most common and severe one is phenotype A. The severity of phenotype A may be due to increased serum AMH and per follicle AMH secretion as seen in our study. Further larger prospective studies are needed to conclusively establish the association of insulin resistance and BMI across the PCOS phenotype spectrum.

Keywords: Polycystic ovary syndrome, phenotype, insulin resistance, AMH/AFC ratio

[MI0537]

Can Teleconsultation in Obstetrics Overcome Deficiencies Due to Decreased Physical Visits in Terms of Maternal and Fetal Outcome?

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Background and Objectives: Physicians and patients want to minimize hospital visits and find alternative ways of consultations during COVID era. Evidence suggests telemedicine provides comparable health outcomes when compared with traditional methods of health care delivery and it enhances patient satisfaction. The purpose of this study is to share our experience of starting a new teleconsultation unit for antenatal patients. The study aims to determine qualitative evidence of telecommunication being conducted for delivery of optimal services to pregnant women and to substantiate its effectiveness by exploring the patient's experience.

Methodology: The teleconsultation facility was started in April, 2020 during lockdown. After obtaining appropriate history from the patient, they were investigated and treatment advised over telephone. Antenatal patients were followed with teleconsultation and physical appointment was given when needed. Those with high risk pregnancies like, GDM, pregnancy with hypertension were advised for home blood pressure and blood sugar monitoring and managed properly. Data of teleconsultation as well as the maternal and fetal outcomes of pregnanciesmanaged by teleconsultation were recorded. The patients and provider were interviewed regarding their satisfaction with teleconsultation services. Departmental records of telehealth service conducted from April to September, 2020 were reviewed thoroughly, besides telephonic communication to update latest details. All data together compiled in a systematic manner and analyzed.

Results: A totalof 378 pregnant women were provided antenatal services through teleconsultation, Of the total pregnant women seeking teleconsultation, 12% were in first, 19% insecond and 69% in third trimester. 28% were primigravida whereas remaining were multigravida. 88% were high risk and 12% were low risk pregnancies.

2.6% mothers had history of previous caesarean section and 1.3% had history of previous two caesareansection. 3.1% had twin pregnancy. 10% conceived afterinfertilitytreatment. Bad obstetric history was present in 13.6% and history of recurrent pregnancy loss in 3.6% of women.

Associated high risk factors were hypertensive disorders (9.2%),gestational diabetes (14.8%), hypothyroidism (17.6%),

anemia(7.2%) and 2% had pregnancy complicated with heart disease. Intra hepatic cholestasis of pregnancywas present in14% and oligohydramnios in 6.2% of pregnancies.

Around 4.7% (n=18) of pregnancy got aborted, 51% (n=193) delivered and 44% (167) are continuing ANC care. Among delivered, 82.6% delivered at AIIMS, 11.85 at other centers and 5.5% home deliveries.42.5% had normal vaginal deliveries, 54.3 % had cesarean deliveries and 3.1% had instrumental deliveries. Low birth weight was seen in 16% and Apgar at 5 minutes was 9 in 90% cases.

On an average, each patient had 3 teleconsultations and 2 physical visits.88% patients were satisfied with teleconsultation. 88% teleconsultation providers felt that they could provide adequate care by tele consult.

Conclusion: Teleconsultation minimizes the number of physical visit without affecting the maternal and fetal outcomes.In the setting of social distancing and lockdown teleconsultation is found beneficial in delivering primary health care. It is not inferior to physical consultation. It has improved inter person communication as well as doctor-patient communication, creating a channel for information transfer which would lead to proper decision making & timely interventions anticipated.

[MI0637]

Serum Adiponectin Levels in Pregnant Women with and Without Gestational Diabetes Mellitus

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Introduction: The prevalence of gestational diabetes mellitus (GDM) is increasing worldwide and more so in developing countries such as India leading to increased adverse feto-maternal outcomes. Improvement of targeted screening of GDM by inclusion of first trimester biomarkers like adiponectin may be feasible, facilitating stratified care and early intervention.

Objectives: To study the serum adiponectin level in GDM and non-diabetic pregnant women and to assess serum adiponectin as a screening tool for GDM**.**

Methods: In this prospective observational study, we recruited a total of 330 women less than 16 weeks period of gestation attending our antenatal care outpatient department. From this cohort of 330 patients, 195 patients were excluded as per the exclusion criteria and 45 women of GDM (cases) and 90 women of normal feto-maternal outcome (controls) were included. The serum adiponectin estimation was done in these selected 135 women in their nested samples with CBI Adiponectin ELISA Kit AP348G.

Results: There was a significant increase in the incidence of GDM with increasing maternal age, BMI, parity and a positive family history of diabetes mellitus. We found that the mean adiponectin value decreased with increasing age (p=0.023) and with rising BMI (p=0.433). **The mean serum adiponectin in our study was 12.75 ± 6.43 µg/ml and 17.55 ± 8.66 µg/ml in the cases and controls, respectively with p value of <0.001 suggesting a significant decrease in GDM patients**. Considering the cut-off of serum adiponectin as 16.64µg/ml, the sensitivity of the test was 86.67% (95% CI, 73.21-94.95%) and the specificity was 47.78% (95% CI, 37.13-58.57%). The positive predictive value was 45.35% and the negative predictive value was 87.76%. The accuracy of the test was 60.74%. The area under the curve was 0.687 (95% CI, 0.595 to 0.780). We also observed that for every 1 µg/ml rise in serum adiponectin level, the risk of GDM reduced by 9%. **After adjusting for confounding factors, women with low adiponectin had 4.8-fold increased risk of GDM** (p=0.002). Lean women with low adiponectin concentrations (≤16.64 µg/ml) as compared with lean women with adiponectin concentrations of at >16.64 µg/mal experienced 8.19-fold increased risk of GDM. Women who were overweight and who had low adiponectin concentrations experienced 9.13-fold increased risk of GDM**.**

Conclusions: Serum adiponectin can be used as an early predictive marker of GDM with moderate accuracy. It may facilitate risk stratification and targeted OGTT screening in women at risk of GDM, thereby aiding in early interventions and prevention of overt GDM development. Further research in devising a model for prediction and risk stratification of GDM in the first trimester is the way forward. This can be achieved by coupling maternal risk factors and adiponectin, since each of them individually exhibit moderate accuracy.

[MI0638]

Ultrasonographic Assessment of Cervix for Prediction of Successful Induction of Labour

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Introduction: Bishop Score is the gold standard for pre-induction assessment of state of cervix in terms of prediction of successful Induction Of Labour (IOL). Sonographic assessment of cervix can be a patient friendly assessment option with lesser inter and intra observer variation than in conventional Bishops scoring.

Objective: The present study was done to evaluate the role of pre induction cervical assessment by transvaginal sonography(TVS) for prediction of successful induction of labour**.**

Materials and Methods: This prospective observational cohort study was conducted in Department of Obstetrics and Gynaecology in Vardhman Mahavir Medical College and Safdarjung Hospital on 140 women who were planned for induction of labour over duration of one year. The pre induction Bishops score and ultrasonographic parameters like cervical length, funnelling width, Head Perineum Distance (HPD), cervical width and Angle of Progression (AOP) were assessed by two different observers. Patients were followed till delivery and labour outcomes were recorded. Statistical analysis was done using the statistical package for social sciences (SPSS) version 21.0.

Results: The combined sensitivity and specificity of various Bishops parameters for predicting successful IOL was found to be 83.06% and 50% respectively while that for TVS were 89.52% and 100% respectively. The respective ROC curves reflected cut off of < 2.99cm, >0.2cm, >2.9cm, >3.1cm and >94 degrees for cervical length, funnelling width, HPD, Cervical width and AOP respectively, with significant association with successful IOL.

Amongst these AOP had maximum sensitivity (87.90%) while both AOP and USG cervical length had maximum PPV of 99.1%. Straight shape of cervix was significantly associated with successful IOL.

Conclusion: Ultrasonography as an objective method for pre induction cervical assessment has a better predictive accuracy than conventional Bishop scoring, thus it can be used for pre induction cervical assessment.

[MI0639]

Role of Vaginal pH on The Efficacy of Dinoprostone Gel in Cervical Ripening for Labour Induction

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Background: Induction of labour with dinoprostone gel is routinely used in obstetrics. Prostaglandins has low solubility at lower pH so its absorption increases at high pH. Vaginal pH is investigated as a potential factor influencing efficacy of dinoprostone gel in cervical ripening for labour induction.

Objective: To study the role of vaginal pH on the efficacy of dinoprostone gel in cervical ripening for labour induction.

Methods: 95 pregnant women who had indication of labour induction with Bishop score <6 were enrolled in prospective observational study. After vaginal pH assessment using pH indicator paper strips and Bishop score assessment, all women received dinoprostone gel intracervically for cervical ripening. After 6 hours, gel was repeated depending on cervical status or labour was augmented. Primary outcome of the study was improvement in Bishop score after 6 and 12 hours. Secondary outcomes were induction-delivery interval and mode of delivery (vaginal and caesarean delivery).

Results: Mean vaginal pH was 4.9 ± 0.58.(range 4-6) for study subjects. The significant association was noted between vaginal pH and improvement in bishop score after 6 hrs (P=<0.0001), after 12 hrs. (P=0.024), induction delivery interval (P=<0.0001) and mode of delivery(P=<0.0001). No significant differences were noted with women with high vaginal pH(≥5,n=58) and women with low vaginal pH(<5, n=37) with respect to maternal age, parity and gestational age.

Conclusion: Vaginal pH appears to be a better tool for assessing pre induction favourability of cervix and predicting labour outcome.

Keywords: Induction of labour, dinoprostone gel, vaginal pH, cervical ripening.

[MI0640]

To Evaluate The Efficacy of Myoinositol in Treatment of Gestational Diabetes Mellitus In Asian Indian Women: A pilot study

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Introduction: GDM is one of the major health issues in pregnant patients worldwide. Prevalence in India varies from 8%-20% depending on the criteria used for diagnosis. GDM can have significant adverse effects on the immediate and long-term health of the mother and baby such as preeclampsia, shoulder dystocia, birth injuries, macrosomia, neonatal hyperinsulinemia and hyperbilirubinemia. Treatment of women with gestational diabetes including dietary advice, blood glucose monitoring, and insulin therapy, reduces the rate of serious perinatal outcomes from 4 percent to 1 percent. Myoinositol has been identified as a potentially novel treatment for GDM and has a role in decreasing insulin resistance by acting on the secondary messengers of insulin action pathway.

Objective: To compare efficacy of myoinositol with medical nutrition therapy (MNT) vs. MNT alone for treatment of GDM in Asian Indian women.

Methods: This pilot randomized controlled trial was registered with the Clinical Trial registry of India CTRI2018/05/013937 and conducted after ethical approval. 100 antenatal patients with singleton pregnancy with GDM diagnosed between 12-28 weeks gestation were included. Overt Diabetes**,** twin pregnancy, pre-existing renal disease, heart disease and other chronic medical disorderswere excluded. Patients were randomized in two groups by opaque envelope method. Group-1(n=50) received Myoinositol 1000 mg+ Folic acid 0.5mg, twice daily along with MNT; Group-2 received only MNT with Folic acid 0.5 mg, twice daily. Both groups were given iron, calcium and Vitamin D3 as part of regular ANC care. Patients were then followed with 4-point blood sugar monitoring 2 weekly. Primary outcomes measure wasglycemic control as monitored by 4-point blood sugar profiles and percentage reduction in need of additional pharmacologic therapy.

Result(s): Baseline risk factors for development of GDM was comparable in both groups. In group-1, glycemic control was achieved in 89.8% patients which was higher than group-2 (68%)(p 0.008). The need for additional treatment with insulin or metformin was lesser in Group 1 vs. Group-2 (5/49 vs. 16/50)(p=0.08). The median dose of insulin was 19 units in cases(range-16-41) compared to 12 units (range 5-27) in the control group though the difference was statistically not significant (p=0.192)

Conclusions: Oral supplementation with myoinositol in dose of 1 gm twice daily, when started soon after the diagnosis of GDM, is effective in achieving glycemic control and decreasing the need for additional pharmacological therapy as compared to controls in Asian Indian women.

[MI0641]

Myo-Inositol and D-Chiro-Inositol Combination on Menstrual Cycle Regulation in Young Girls with Pcos- A randomized open-label study

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Introduction: Polycystic ovary syndrome (PCOS) is the most common endocrine cause of menstrual irregularity and ovarian dysfunction in the reproductive age women. Menstrual complaints such as delayed menarche, oligomenorrhoea, amenorrhoea or polymenorrhoea are the most common

presenting complaints in adolescents and young girls with PCOS.

Objective: To compare the effect of myo-inositol and D-chiro-inositol combination (MI+DCI) with combined hormonal contraceptive (CHC) pills on menstrual cycle regulation in young Indian girls with polycystic ovary syndrome (PCOS).

Methods: Randomized open-label study comparing MI+DCI combination (550 mg+150 mg) with CHC (ethinyl estradiol 20 mcg + drospirenone 3 mg) in girls with PCOS. Seventy consecutive girls aged 15-24 years with PCOS presenting with delayed cycles were assessed for effect on menstrual cycle regularity as the primary outcome.

Results: The mean age and BMI of total subjects were 20.71±2.27 years and 24.95±4.03 kg/m^2 respectively. Spontaneous resumption of menses occurred in 84.85% (n=28) of girls with MI+DCI, as compared to 100% (n=34) of girls on CHC who had withdrawal bleeding. The mean cycle length reduced with both MI+DCI (124.54±8.08 days to 57.75±3.00 days, P<0.001) and CHC (105.88±7.96 days to 30.53±2.95 days, P<0.001). Regular menstrual cycles (24-38 days) were established in 27.27% (P=0.001) girls with MI+DCI and 88% (P<0.001) with CHC, as compared to none at presentation. Amenorrhea persisted in 15.15% of girls with MI+DCI and none with CHC. Three months after stopping the drugs, 72.73% (n=24) in MI+DCI group and 73.53% (n=34) in CHC group continued to have spontaneous cycles. On univariate analysis, baseline serum testosterone, AMH and phenotype A correlated with non-responders. AMH decreased with both the drugs (P=0.001), while LH (P=0.001) and testosterone (P=0.04) decreased with CHC and HOMA-IR (P<0.001) with MI+DCI.

Conclusions: Myo-inositol and D-chiro-inositol combination, as a non-hormonal option, was effective in regularising menstrual cycles in young girls with PCOS, and the effect persisted even after stopping the treatment.

[MI0643]

Vitamin B12: The hidden culprit of neural tube defect

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In our study we found out the association of low maternal levels of Vitamin B12 and occurrence of NTD. We have also shown the difference in folic acid and homocysteine levels in antenatal women with and without fetal NTD. We have also included dietary comparison between the cases and controls.

Analytical case-control study which included 80 women each of cases (antenatal women with fetal NTD detected on second trimester scan) and controls (antenatal women with structurally normal fetus on second trimester scan). A detailed history which also include nutritional history with emphasis on intake of non-vegetarian diet, type of milk product, green vegetables and tea and coffee was taken. Blood sample for routine investigation along with serum Vitamin B12, folic acid and homocysteine was taken in the first contact.

Anencephaly was the predominant NTD (41.3%) followed by Meningomyelocele (28.8%), multiple NTD (25%) encephalocele (5%). There was significant difference in serum levels of Vitamin B12, Folic acid and homocysteine between cases and controls (*p<0.001)* Regarding the dietary history of the study subjects 52.2% cases were on mixed diet, 66.3% consumed at least 100ml milk every day, 96.3% had daily green vegetables while 13.8% had daily non-vegetarian food. While among controls 51.9% were on mixed diet, 72.8% had milk every day, 91.4% consumed vegetables daily but 7.4% had non vegetarian diet daily. As a novel study we also found the mean maternal serum Vitamin B12 level in different NTDs

Our study confirms that a low serum Vitamin B12 and folic acid and high serum Homocysteine levels increases the chances of NTD. The serum levels of Vitamin B12 was significantly low in cases taking vegetarian diet and was significantly high in those taking at least 100ml of milk and non-vegetarian diet daily. The level of micronutrients in the individual NTD has never been done before and this finding provides avenues for more research in this area in pathophysiology of different NTD. Thus, additional supplements of not only folic acid but Vitamin B12 is also necessary preconceptionally for prevention of NTD.

[MIS0652]

Prevalence of Lower Genital Tract Infections in Asymptomatic Pregnant women and Comparison of Maternal and Neonatal Outcome in Screened and Unscreened Group

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Introduction: Lower genital tract infections may ascend the reproductive tract and seed the amniotic cavity, which can trigger an inflammatory cascade eventually resulting in a number of adverse outcomes including preterm birth, chorioamnionitis, foetal growth restriction, stillbirth, puerperal sepsis and early onset sepsis. A timely diagnosis and treatment of maternal infections is a prime target for the prevention of preterm birth, as well as other adverse pregnancy outcomes. For this, screening policies are being formulated based on the local prevalence of the problem and the possible link to adverse outcome. Indian literature reveals a high prevalence of LGTI in the mid-trimester among asymptomatic women, which is strongly associated with spontaneous pre-term delivery which mandates active screening of LGTI during pregnancy

Objectives: The study aimed to determine the prevalence of lower genital tract infections in asymptomatic pregnant women and then compared the maternal and neonatal outcomes in screened and unscreened group.

Methods: This was a prospective and interventional randomized comparative study conducted in the Department of Obstetrics and Gynaecology over a period of 18 months. It included 300 singleton low risk asymptomatic pregnant women with period of gestation<20 weeks. All the recruited participants were randomly divided into two groups: Group A: screened group included patients who underwent screening and Group B: unscreened group who did not underwent screening. After investigations for infections, all the participants in Group A who

tested positive for any of the above infections were treated accordingly. All the participants were followed-up to assess and quantify the maternal and neonatal outcome at the time of delivery and after 6 weeks.

The data were entered in MS EXCEL spreadsheet and analysis was done using Statistical Package for Social Sciences (SPSS) version 21.0. A p value of <0.05 was considered statistically significant.

Results: The women in both the groups were comparable in terms of median age (23.5y in screened and 24y in unscreened, p=0.108) LGTI was present in 30.67% patients; most common type of lower genital tract infection was B. Vaginosis (65.22%) followed by Candidiasis (21.74%), Trichomoniasis (6.52%), Gonorrhoea (4.35%) and Chlamydiasis (2.17%). There was significant improvement in maternal outcomes of the screened group as compared to the unscreened group owing to the treatment for LGTI. Women with screened group had significantly more vaginal deliveries and spontaneous labour, and significantly less preterm labour, PPROM, chorioamnionitis, wound gape, and preterm births. Neonates born to screened group women had significantly more birth weight, APGAR at 5 minutes, and significantly less NICU admission.

Conclusion: There is a high prevalence of LGTI in asymptomatic pregnant women. Women after screening and treatment had significantly less preterm labor, PPROM, chorioamnionitis, wound gape, and preterm births. Neonates born to screened group women had significantly more birth weight and APGAR at 5 minutes, and significantly less NICU admission.

Thus, it can be concluded that infection screening for asymptomatic pregnant women along with treatment programs may help in improving the outcomes of the mother and the neonate.

[MI0744]

Maternal Predictors for Early Onset Neonatal Sepsis in Premature Rupture of Membrane at Term Pregnancy

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Introduction: PROM occurs in 10% of all pregnancies with majority of cases (60-70%) occurring before 37 completed weeks of gestation. Infections of lower genital tract and fetal membranes are most common causes of PROM. Sepsis is the commonest cause of neonatal morbidity and mortality.

Objective: To study maternal risk factors for early onset neonatal sepsis in premature rupture of membranes at term.

Methods: This was a prospective observational study including 140 patients with PROM between 37-40 weeks of gestations. Rupture of membrane was diagnosed on the basis of history of gross vaginal fluid loss and clinical examination. Specific investigations were done in mother: total leukocyte count, urine for culture sensitivity and high vaginal swab for culture sensitivity apart from routine ANC investigations. Newborns were categorized into three groups; healthy baby, baby with clinical sepsis with signs and symptoms, baby with proven sepsis on the basis of 1) sepsis screen test a)total leukocyte count (<5000 or>20,000/cumm) b) absolute neutrophil count (<1800/cumm) c) Immature neutrophil (band cell)to total neutrophil count (I/T) ratio (>0.2) d) CRP (>1 mg/dl) 2) Blood culture. 3) Chest x ray and lumbar puncture will be done if required.

Results: Mean age of the patients was 24.74 ± 4 years. Neonatal sepsis was 5.13% in booked and 10.89% in unbooked patients. Mean duration of leaking per vaginum(hours) was 16.75 ± 43. Normal vaginal delivery occured in 80.71% of patients, LSCS in 17.86% patients. Most common indication of LSCS was fetal distress, followed by failure to progress of labor, DTA, chorioamnionitis, arrest of descent and malpresentation. Mean duration of antibiotic course before delivery(hours) was 13.69 ± 5. Mean duration of labor (hours) was 17.27 ± 6.04. Mean number of digital examinations was 2.54 ± 0.98. 7.86% of babies had clinical sepsis. Culture proven sepsis was present in 1.43% babies without any case of neonatal seizures. Mean birth weight was 2.73 kg and APGAR score at 1 and 5 minute was 7.41 and 8.31 respectively. NICU admission was required in only 13(9.29%) neonates. Febrile morbidity (3.57%) was most common maternal morbidity followed by puerperal pyrexia (2.86%), wound gap (1.43%). Chorioamnionitis and puerperal sepsis was seen in only 0.71% each. There was no case of PPH. There was no neonatal and maternal mortality. A statistically significant association was seen with increased total leucocyte count(/cumm), UTI and lower genital tract infections with early onset neonatal sepsis (p<0.05). On performing multivariate logistic regression, total duration of LPV(hours), total leucocyte count(/mm3) had independent significant risk factors of neonatal sepsis with adjusted odds ratio of 1.195, 1.001 respectively.

Conclusions: Factors such as duration of LPV, prolonged duration of labor and antibiotic course, raised total leucocyte count, multiple digital vaginal examination, UTI, lower genital tract infection can significantly affect early onset neonatal sepsis among women with PROM (p<0.05).

[MI0745]

Colonisation of Vagina with Aerobic Bacteria Detected in Active Labour and Its Association with Puerperal and Neonatal Sepsis

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Introduction: Infections occurring during pregnancy, childbirth and the puerperium are associated with increased risk of maternal and perinatal morbidity and mortality. The present study evaluated the maternal genital tract as a possible source for early onset neonatal sepsis and puerperal sepsis.

Objective: To find the prevalence of colonisation of vagina with aerobic bacteria detected in active labour and its association with puerperal sepsis and neonatal sepsis.

Methods: A prospective cross sectional study conducted in a tertiary hospital, India from October 2018 to March 2020. Pregnant women (n=920) in active labour with intact membranes were recruited. High vaginal swabs were collected and cultured, by standard methods for detection of aerobic bacteria. The primary outcomes were development of puerperal sepsis and early onset neonatal sepsis.

Results: In a total of 920 subjects, colonisation was found in 484 (52.6 %), whereas 436 (47.4%) were not found to be colonised, CoNS being the predominant coloniser (13.2%) followed by *E. coli* (8.9%). Logistic regression found multigravidas at 1.4 times higher risk of colonisation than primigravidas [OR 1.399; 95% CI 1.064,1.84]. Women undergoing sample collection at first vaginal examination were at 0.34 times lower risk of colonisation compared to the women with more than one vaginal examination [OR 0.34; 95% CI 0.241,0.481]. The incidence of colonisation increased with progressive vaginal examinations ($p < 0.001$). None of the colonised women and their neonates developed puerperal and early onset neonatal sepsis respectively.

Conclusion: No association was found between vaginal colonisation with aerobic bacteria in active labour with puerperal and neonatal sepsis.

[MI0746]

Correlation Between Body Mass Index and Mid Upper Arm Circumference as A Screening Tool for Classifying Nutritional Status of Pregnant Women: A prospective cohort study

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Introduction: Currently BMI is used to classify pregnant women into various nutritional categories. BMI is ideally calculated with pre pregnancy weight, as weight gain during pregnancy confounds the calculation later in pregnancy. In our country the pre-pregnancy weight is either not known or not available, as women avail antenatal services late in pregnancy. MUAC is a well-accepted tool to classify nutritional status in children however limited studies are available of its use in pregnancy. Unlike weight, MUAC does not undergo significant change as the pregnancy advances.

Objective: In this study we aim to find a correlation between the BMI and MUAC in pregnant women and compare the changes in BMI and MUAC over various trimesters.

Methods: Three hundred pregnant women were subjected to BMI and MUAC measurements at a fixed interval in different trimesters. Detailed dietary and socioeconomic history, and anthropometric measurements were taken at enrollment. Correlation coefficient was calculated between BMI and MUAC and changes over various trimesters were calculated.

Results: The mean BMI of women in this study was 22.92 kg/m2 in the first trimester, 24.48 kg/m2 in the second trimester and 28.24 kg/m2 in the third trimester. The mean MUAC in first, second and third trimesters were 24.26 +/- 3.09 cm, 24.61+/- 3.03 cm, and 25.09 +/- 3.07 cm respectively. Mean difference of 0.43 cm (3.2%) was noted from first to third trimester in mean MUAC compared to 5.32 Kg/m2 (23.14%) in mean BMI. The nutritional category changed in 84% and 28% patients using BMI and MUAC, respectively.

Conclusion: Ministry of Health and Family Welfare (MoHFW) recommends BMI criteria for nutritional assessment which is to be calculated by pre-pregnancy weight. Positive correlation was noted between BMI (gold standard) and MUAC and less change was noted in MUAC than BMI over three trimesters. Therefore MUAC seems to be a reliable tool for classifying antenatal women into different nutritional categories who access late antenatal care with added advantage of low cost, simplicity and convenience.

Key Words: BMI, MUAC, GOI

Highlight: To the best our knowledge, this is the first study to find correlation between BMI and MUAC in Indian setting. Positive correlation was noted between BMI and MUAC and change in MUAC was not significant over various trimesters. Therefore MUAC can be recommended for nutritional assessment of antenatal women with added advantage of low cost, simplicity and convenience.

[MI0747]

Left Ventricular Function in Women with Hypertensive Disorders of Pregnancy

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Introduction: Hypertensive disorders of pregnancy are major causes of maternal and perinatal morbidity and mortality. Cardiovascular changes in women with hypertensive disorders of pregnancy are seen to persist for at least several months postpartum thereby predisposing to long term cardiovascular risk.

Objective: To evaluate left ventricular function in women with hypertensive disorders of pregnancy in comparison to normotensive women and correlate with maternal and neonatal outcome.

Methods: It is a prospective observational case control study which included 160 normotensive antenatal women in the control group and 160 antenatal women with hypertensive disorders of pregnancy in case group beyond 20 weeks period of gestation. Amongst 160 women in the case group, 57 were diagnosed with gestational hypertension, 40 with preeclampsia without severe features,40 developed severe preeclampsia and 15 developed eclampsia. Women with chronic hypertension, overt or gestational diabetes mellitus and preexisting cardiovascular disease were excluded. Echocardiography was performed to assess left ventricular function and structure using both linear and area/volume based measurements.

Results: Compared with normotensive antenatal women, women with hypertensive disorders of pregnancy were observed to have significantly higher value of Left ventricular internal dimension in diastole (LVIDd) and Left ventricular internal dimension in systole (LVIDs) with a p value <0.0001. Similarly, women with hypertensive disorders of pregnancy were seen to have significantly lower values of Fractional shortening (FS) and Left ventricular ejection fraction (EF) as compared to normotensive women with a p value <0.0001. 8.1% of the women in the hypertensive group were observed to have mild systolic dysfunction as compared to normal systolic function in all normotensive women ($p<0.001$). Amongst different classes of hypertensive disorders of pregnancy, significant left ventricular structure and function changes were observed with increasing severity of hypertensive disorders of pregnancy ($p<0.001$). Mild systolic dysfunction was observed amongst 20% of women with

severe preeclampsia and 33.3% of eclamptic women (p<0.001). Significantly lower value of LVEF was observed in women with hypertensive disorders of pregnancy who developed maternal complications and had adverse neonatal outcomes (p<0.001).Structural and functional changes in the left ventricle in women with hypertensive disorders of pregnancy are seen to be associated with significantly higher rates of maternal complications and development of adverse neonatal outcomes. In our study, EF at a cut off value of < 63% was observed to predict development of maternal complications with a sensitivity of 78% and a specificity of 75%. Similarly at a cut off of Ejection fraction ≤67%, development of adverse neonatal outcome can be predicted with a sensitivity of 83%, and a specificity of 49%.

Conclusion: Significant left ventricular changes were observed amongst women with hypertensive disorders of pregnancy using echocardiography. Echocardiography can be used for routine maternal evaluation in women with hypertensive disorders of pregnancy to detect early signs of cardiac dysfunction, especially amongst women with severe preeclampsia and eclampsia and amongst women who develop complications and/or have a history of hypertensive disorders of pregnancy.

[MI0749]

Prediction of Placenta Accreta Spectrum by Placenta Accreta Index in High Risk Pregnancies

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Introduction: Placenta accreta spectrum (PAS) occurs when placenta implants at the area of defective decidualization typically caused by pre-existing damage to the endometrial-myometrial interface. In patients having the two most common risk factors- placenta previa and previous cesarean delivery the risk of PAS increases with number of caesarean sections. Antenatal diagnosis can ensure multidisciplinary management at centre of excellence which can reduce complications like exsanguinating haemorrhage and feto-maternal mortality. There may be a role of a clinical and radiological scoring system to predict PAS in the antenatal period.

Objective: Assessment of placenta accreta index and each of its parameters for prediction of placenta accreta spectrum in high risk pregnancies and its association with degree of placental invasion and severity of maternal outcomes

Methods: A prospective cohort study was conducted on 71 pregnant women with placenta previa and history of previous cesarean. Patient History and ultrasonography (gray scale with color doppler) was used to calculate the index for each patient after informed consent. Definitive diagnosis however, was made clinically when placental invasion was seen during caesarean section and by histopathological evaluation for those requiring hysterectomy. Maternal outcomes were noted and data was evaluated using the latest version of statistical package for the social sciences (SPSS) software.

Results: All the ultrasound parameters of placenta accreta index were statistically significant (P value <0.001). ROC curve with AUC of 0.87(with 95% CI of 0.77 to 0.94) showed that a score of 4.75 was the best cut-off value to diagnose PAS. Out of the 30 patients found to have placental invasion, 22 had a PAI score of more than 4.75. The score was found to have a sensitivity of 77.3%, specificity 95.1%, positive predictive value 91.7%, negative predictive value 83% and diagnostic accuracy 85.9%. Mean duration of postoperative ICU stay as well as total blood loss was seen to be more in patients with a higher index.

Conclusions: PAI of ≥ 4.75 can be used as a cut-off value for prediction of PAS in high risk patients. Increase in PAI is associated with increased placental invasion and maternal complications. Thus, women with placenta previa and history of previous cesarean should undergo screening for PAS disorders by placenta accreta index.

[MI0851]

Assessment of Pelvic Floor Muscle Strength During Involuntary Muscle Contraction as An Adjunct to Voluntary Muscle Contraction to Determine Pelvic Floor Muscle Function

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Introduction: Pelvic floor muscle strength (PFMS) and function is important to maintain urinary and faecal continence and to prevent pelvic organ prolapse. Pelvic floor muscles can be contracted voluntarily on demand, whereas involuntary muscle contraction of pelvic floor occurs in situation of increased abdominal pressure such as coughing.

International continence society defines normal pelvic floor muscle function as ability of pelvic floor muscles to contract and relax voluntarily as well as involuntarily.

Contraction of the pelvic floor muscles (PFM) voluntarily or involuntarily results in the inward movement of the perineum and upward movement of the pelvic organs, which leads to closure of urethra, anus and vagina. This movement of PFM can be observed and used as a measure of PFMS and is suggestive of good pelvic floor muscle strength, an absent movement on contraction and absent or downward movement on coughing are ineffective movements suggestive of a weak pelvic floor muscle strength.

Over the years only voluntary muscle contractions (VMC) have been used to measure PFMS, whereas strength during involuntary muscle contractions (IMC) have not been studied.

The present study was designed with the research question in mind that "Whether pelvic floor muscle strength (PFMS) assessment done during Involuntary Muscle Contraction (IMC) an adjunct to Voluntary muscle contraction (VMC) to determine Pelvic floor muscle function."

Objectives

1. To measure pelvic floor muscle strength during involuntary muscle contraction (IMC) and voluntary muscle contraction (VMC) while coughing and contraction.
2. To measure prevalence of weak PFMS by assessment during involuntary muscle contraction in addition to voluntary muscle contraction.

Methods: A cross-sectional study was conducted in a tertiary care hospital after ethical approval and 384 women were recruited after proper informed written consent from the OPD of gynaecology and family welfare department. Pelvic floor assessment was done by oxford score, digital palpation and perineometry.

Statistical Analysis

1. Quantitative variables were correlated using ANOVA/Kruskal Wallis test and Unpaired t- test/Mann-Whitney Test.
2. Qualitative variables were correlated using Chi-Square test / Fisher's exact test.

Results: Mean age of women in this study was 36.89 ± 12.2years. Mean BMI of study population was 25.91 ± 4.19 kg/m2. Mean parity was 2.43, with median of 2.

In the study 75.78% had inward movement during contraction i.e. effective VMC and 55.47% had inward movement during coughing i.e. effective IMC. It was seen that out of 291 women with effective VMC only 64.95% women had effective IMC, and 88.7% women with effective IMC also had effective VMC. Hence, not all women with effective VMC had effective IMC and vice versa. Thus, if the assessment is done during VMC alone about 40.05% women with ineffective IMC (suggestive of weak PFM) will be missed.

Conclusion: Assessment of PFMS done by palpating movement of perineum both during IMC and VMC provides a better knowledge of the pelvic floor function. Assessment is fairly quick, easy to perform and requires no instruments/gadgets therefore can be easily done in OPD. It can be used as an effective method for screening of pelvic floor dysfunction and planning individualized treatment modalities.

[MI0852]

Domestic Violence During Pregnancy: Evaluating The Impact on Maternal and Perinatal Health - A pilot study in Uttar Pradesh

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Introduction: Domestic Violence [DV] is a global health problem of pandemic proportions. WHO identifies it as psychological, physical or sexual violence or threats of the same, in the premises of one's home. The perpetrator can be husband, intimate partner, friend or a family member. DV during pregnancy has widespread implications on adverse obstetric maternal and fetal outcomes.

Aim of the Study: To find out the prevalence of domestic violence in antenatal women and observe the association between DV and maternal and perinatal outcome.

Methodology: It is a cohort study carried out at ELMCH, over a period of 10 months. Data was collected from pregnant women reporting to the outpatient department of obstetrics and gynecology in their third trimester of pregnancy. The pregnancies were followed up till delivery and one week post partum to study the obstetric and perinatal outcome. Appropriate statistical methods were applied to determine significance of the observations and Odds Ratio was calculated for the risk factors.

Results: The prevalence of DV during pregnancy was 22.2%, with psychological violence being the most common form observed. Increased relative risk was found for hypertensive disorders of pregnancy, antepartum hemorrhage, recurrent urinary tract infection and preterm labour. Apgar scores of babies in affected mothers was lower and there were significantly greater NICU admissions. This was independent of period of gestation at delivery.

Conclusion: DV affects at least 1/4th of antenatal women. Majority of them do not realise the extent and forms of DV, and accept the violence as a routine norm of marital life. DV during pregnancy has a significant association with adverse obstetric and perinatal outcomes.

Key Words: Domestic violence, NICU, pregnant women, Preterm labour

[MI0853]

Risk Factors for Psychosocial Stress During Pregnancy

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Introduction: Psychosocial stress in pregnancy (PSP) is stress experienced as a result of inability of the women to cope with pregnancy. It can occur because of major life events or it can be due to women's perception of the physiological changes of pregnancy as stressful. Mothers exposed to stressful conditions are more prone for adverse pregnancy outcomes particularly preterm birth and fetal growth restriction than those without any stress. In spite of the evidence of adverse pregnancy outcome it has not been included in routine ante-natal check-up and obstetricians tend to ignore its significance. This ends up in a failure to recognize its presence and makes women suffering with high psychosocial stress even more helpless and prone to develop maternal as well as fetal complications.

Objective: Purpose of this study was to find the prevalence of high psychosocial stress in pregnant women not exposed to any major stress event and to determine the factors responsible for high psychosocial stress in these women.

Methods: This was a cross-sectional observational study including 350 women. Perceived stress scale (PSS) is a validated scale for measuring stress. It measures only the woman's perception of stress without mentioning any event in life which may have caused it. Women were divided into 2 groups based on their score on PSS.

The 2 study groups were women with high psycho-social stress (Group A) and women with low or moderate psycho-social stress (Group B). Univariate and multivariate logistic regression was used to find out the significant risk factors affecting psychological stress.

Results: Mean value on PSS-10 was 15.79 ± 6.95 with the range of 4-36. Score on PSS was 27-40{high} in 10% women, 14-26{moderate} in 55.71% women. It was 0-13{low} only in 34.29% women. Most of the women in both groups were between 21-25 years of age and were 37 weeks or more pregnant.

On univariate analysis, higher age (P< 0.0001), unplanned

pregnancy (P <0.0001), low socio-economic status (P=0.0318), addiction in husband (P <0.0001), negative relationship with husband (P <0.0001) and negative relationship with friends/ family (P <0.0001) were found to be significantly associated with high PSS score. However on multivariate analysis, addiction in husband (P=0.936) and negative relationship with husband (P=0.398) were found to be non-significant.

Conclusion: This study brings to light the prevalence of psychosocial stress in pregnancy and its determinants. With the established relationship between maternal stress level and pregnancy outcome in various studies, the assessment and management of stress in the pregnancy is crucial. It is recommended that all ante-natal women should be routinely screened for psychosocial stress. It will enable the obstetrician to intervene timely to reduce high psychosocial stress and its associated complications thus, reducing the burden on healthcare sector.

[MI0854]

Association of Maternal Supine Sleep Position And Risk Of Late Stillbirth

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Introduction: Still birth is an important, potentially avoidable, global health care issue, estimated to be nearly twice as common as neonatal death. Preventing stillbirths is an important challenge of obstetric care in the modern world. Various studies and reviews have identified risk factors for stillbirths, most of which are non-modifiable in the ongoing pregnancy. The current approach is to identify modifiable risk factors such as maternal lifestyle and personal habits. Recently, emphasis has focused on the impact of maternal sleep practices as a modifiable risk factor for late stillbirth (≥28 weeks).

Objectives: To determine the association of maternal going to sleep position with risk of late stillbirth.

Methods: The present study was conducted in the Department of Obstetrics and Gynaecology in collaboration with Department of Paediatrics, Safdarjung hospital, New Delhi. During the study period, a total of 175 women who experienced a stillbirth at ≥28 weeks and met the inclusion criteria, were recruited as the case group, and 175 gestation matched (± 1 week) women with ongoing pregnancies were taken as controls. Before starting the study, permission was obtained from the ethical committee of the institution.

Results: A significantly higher proportion of women in the case group reported **supine** going to sleep position last month i.e. 38.2% in cases as compared to 0.5% of controls **(p = 0.001 and aOR 40.4, 95%CI 4.21-388.75).**

Conclusions: Maternal supine going to sleep position during last month is an independent risk factor for late stillbirth. **(p = 0.001).** All antenatal women should be advised regarding healthy sleep practices, highlighting their significance in promoting fetal wellbeing and preventing late stillbirths. Pregnant women should be counselled to avoid going to sleep in supine position in the third trimester and advised to go to sleep in left lateral position.

Poster Presentation

Day 2: **25th October, 2020**

[HRP1]

Pregnancy with Tubercular Pericarditis Presenting as A Cardiac Emergency: Review of a rare case

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Introduction: Antepartum/postpartum collapse is one of the few dreaded emergencies confronted by obstetricians globally. The differential diagnosis includes both obstetric and non-obstetric etiologies. Pericardial effusion can present as one of the life-threatening emergencies requiring prompt diagnosis and immediate life-saving measures. Classically, the patient presents with acute chest pain, dyspnea, tachycardia and hypotension. In the developing countries, tuberculosis attributes to 70% of cases of pericardial effusion. Immediate pericardiocentesis and prompt antitubercular therapy leads to a drastic positive outcome in the patient. This patient was 31 weeks pregnant and presented with acute onset cough, dyspnea and hemodynamic instability. She was managed successfully with pericardiocentesis and antitubercular therapy and later she had a normal vaginal delivery.

Objective: We are presenting this case of tubercular pericarditis in a pregnant patient to reiterate the importance of keeping a high index of suspicion for non-obstetric life-threatening conditions and timely managing it with multidisciplinary approach.

Case Summary: A 35-year-old $G_6P_2L_2A_3$ with 31 weeks period of gestation presented to gynecology casualty of Lok Nayak Hospital with complaints of sudden onset of breathlessness and dry cough. On examination, patient had tachycardia with pulse rate of 102/min and a blood pressure of 94/60 mmHg. The cardiovascular system examination was grossly normal and oxygen saturation was maintained. The respiratory system examination revealed reduced air entry on left side and rest was normal. The patient was stabilized and a cardiology referral was done. Cardiac ischaemia markers were negative. The electrocardiogram findings were suggestive of sinus tachycardia. A 2D echo was done which reported pericardial effusion with cardiac tamponade. The patient had a drastic hemodynamic improvement after therapeutic pericardiocentesis. Biochemical evaluation of the tapped pericardial fluid and the pericardial tap for CBNAAT was positive for tuberculosis. In view of the 2D echocardiography and laboratory findings diagnosis of tubercular pericarditis was made and patient was started on antitubercular therapy. The patient further improved within two days and was discharged subsequently. Patient was closely followed up weekly and had to undergo a repeat therapeutic pericardiocentesis on day 10 of the antitubercular therapy.

At 34 weeks, patient went into spontaneous labour and had meconium stained liquor but no fetal bradycardia. Under strict fetomaternal surveillance, she delivered a healthy baby of 2350 g vaginally. There was no exacerbation of symptoms in the postpartum period. She was discharged in satisfactory condition on category I antitubercular therapy.

Conclusion: A high index of suspicion for non-obstetric causes must be kept in mind for patients presenting with antepartum collapse. In the developing countries, tubercular pericarditis must be considered as an important differential diagnosis for such emergencies as prompt diagnosis and timely multidisciplinary approach leads to a drastic positive outcome.

[HRP2]

Beckwith Weidmann Syndrome

Monika Jindal, Ritu Yadav, Reeta Mahey
Monica Gupta, Neerja Bhatla
MMMCH, Kumarhati

Beckwith Wiedemann Syndrome is a rare congenital disease of low prevalence. However, it presents a high prevalence within the genetic pathologies of overgrowth. This syndrome presents typical manifestations such as Macroglossia, Macrosomy at birth, Omphalocele and defects of the anterior abdominal wall. Its origin is known to be genetic, but its mechanism of generation is not very clear. This syndrome has been the object of wide studies since investigators have established a relationship between the methods of Assisted Reproductive Techniques and BWS. Currently, research is oriented towards the improvement of the prenatal diagnostic techniques which would allow a preparation of multidisciplinary team to treat the pathologies with which these patients are born.

Keywords: Beckwith Wiedemann Syndrome (BWS), Ultrasonography (USG), Foetus

[HRP5]

Fetal Sacrococcygeal Teratoma with Full Term Delivery: A case report

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Background: Sacrococcygeal teratoma is one of the most frequently prenatally diagnosed neoplasia. Obstetric ultrasound has a role in the diagnosis and management of these tumor during pregnancy. In this report, we describe a multidisciplinary approach in a case of a patient with fetal sacrococcygeal teratoma and full term delivery, as well as postnatal outcomes.

Case Presentation: A 37 year old G5P4L4 Burmese women at 33 week of gestation with normal gestational course and no relevant medical or surgical history was referred to our institution with a sacrococcygeal mass diagnosis. MRI confirmed the diagnosis of sacrococcygeal teratoma type1according to AAPSS classification. Follow up Ultrasound showed an increase in the size of mass upto 15*11cm with marginally small femur length with other parameters being normal. Antepartum fetal and maternal surveillance was normal. At 38+2 weeks of gestation, Elective LSCS was performed in view of large Sacrococcygeal teratoma. A female baby of 4.5kg with good apgar score was born. After two weeks of birth,surgery was performed successfully. Follow up revealed normal and healthy child growth.

Conclusion: These case report demonstrates the importance of multidisciplinary (Obstetrician, Pediatrician and Pediatric surgeon, Radiologist, neonatologist, Oncologist) approach to offer the best neonatal and maternal outcome, as well as need for follow up by ultrasound in order to minimize complications by assessing mass growth, doppler flow, amniotic fluid.

[HRP10]

Pregnancy after Uterine Artery Embolisation - A rare case report

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Uterine fibroids are among the most common benign tumors of the female pelvis. Uterine artery embolisation (UAE) is a nonsurgical approach to treat uterine fibroids. Potential fertility after UAE is uncertain. Decreased fertility is expected due to decreased ovarian perfusion and endometrial receptivity. Therefore UAE is under-utilised as a treatment approach. Various case reports and case series reports are available on efficacy of UAE and fertility outcomes but large scale RCTs and Indian studies are limited. Objective of this case report is to highlight spontaneous pregnancy conception after UAE and its obstetrical outcome.

Case Report: A 28 year old P1L1A1 female diagnosed with multiple intramural and submucosal fibroids not responding to medical management and not willing for surgical management underwent UAE and responded well. She conceived spontaneously a year after the treatment and was put under close monitoring during antenatal period. She had increase in fibroid size during first trimester with rest of the antenatal period being uneventful. she underwent elective LSCS of an appropriately grown foetus at 37 weeks in view of oblique lie with no intra or post operative complications.

Conclusion: Successful pregnancy outcomes after UAE have been reported, but all pregnancies after UAE require close monitoring for complications. Contradictory to prior belief desired future pregnancy should not remain a relative contra-indication to UAE for symptomatic fibroids in patients not willing for surgery.

[HRP29]

Spontaneous Uterine Rupture in Early Gestation Due to Placenta Percreta

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Introduction: Uterine rupture in early gestation is a rare life-threatening complication of pregnancy. Mostly rupture occurs in presence of risk factors such as previous caesarean or any uterine surgery in the past. Rising caesarean rates, and consequent rise in placenta accreta spectrum also predisposes to rupture. We are reporting a rare case of spontaneous uterine rupture in an unscarred uterus in early second trimester.

Case: A 32 year old G3P2L2 female with previous two normal deliveries presented in casualty with abdominal pain and vomiting since two days, at approximately sixteen weeks period of gestation. Her vitals were stable. On investigations she was found to be anaemic and ultrasound showed an intrauterine pregnancy corresponding to 15^{+6} weeks gestation with free fluid in the abdominal cavity. However, bilateral normal adnexa ruled out heterotopic pregnancy. Patient was being worked up for anemia and ascites. During her hospital course, she developed acute abdominal pain. To rule out any medical or surgical emergency, she was subjected to a repeat ultrasound which showed empty uterine cavity and fetus lying adjacent to uterus. With a diagnosis of uterine rupture she was taken up for emergency laparotomy. Uterus was found ruptured near the left cornu and fetus with placenta were lying in the abdomen. Patient was managed with emergency total hysterectomy, histopathology of which showed placenta percreta with chorionic tissue till serosa.

Conclusion: Placenta percreta may occur even in absence of previous uterine surgeries or other scar and may present with uterine rupture even at an early gestation. A high index of suspicion can timely diagnose and avert potentially catastrophic complications.

[CV1]

Transplacental COVID Antibodies and Cytokine Storm in Newborn: Antibodies do not confer protection

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Pregnant women are one of the most important groups who need special attention during this Covid-19 pandemic. Women's physiological changes in the immune system during pregnancy put them and their neonates at increased risk of negative outcomes of COVID-19 infection but the data is still scarce to comment upon.

A case of asymptomatic SARSCoV-2 infected mother and its effect on neonate is reported. This is the first case where the evidence of cytokine storm in newborn has been demonstrated in the presence of transplacental acquired IgG antibodies.

This shows transplacental transfer of antibodies against COVID does not confer protection. All neonates of the pregnant female having either COVID RT PCR positive or antibody titre positive can be monitored by neonatal IgG antibody titre and the interleukin levels in order to predict and decide the future plan of action.

[CV7]

Assessment for Depression Among Pregnant Women Visiting Tertiary Care Facility During COVID-19 Pandemic

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Introduction: Pregnant women during Covid-19 pandemic might be concerned about well-being of their baby and the risks

involved while visiting hospitals for their antenatal management and delivery. Our Institute is a tertiary care centre where very high risk antenatal patients are referred for their management. These high risk pregnant women are already stressed regarding their pregnancy outcomes and are prone to have mental health problems. The pandemic is adding to this stress. Common psychological problems encountered during pregnancy are depression, anxiety disorders, psychotic disorders and bipolar disorders.

Objective: To screen pregnant women visiting tertiary care facility for depression during Covid-19 pandemic.

Methods: In this observational cross-sectional study, 50 pregnant women visiting antenatal clinic or emergency antenatal services at AIIMS, New Delhi and who consented to participate in the study were screened for depression. The assessment was done using Edinburgh Postnatal Depression Scale (EPDS) which is a set of 10 screening questions. Each question was scored 0 (normal), 1, 2 or 3 (severe), giving a maximum score of 30 for all ten questions. The total score was calculated by adding the numbers selected for each of the 10 items. The scale indicated how the mother had felt during the previous week. Screen positive women were advised to seek a psychiatrist's consultation for further evaluation as they were likely to be suffering from a depressive illness of varying severity.

Results: The mean age of women who participated in the study was 29.7 years. On assessment using EPDS scale; 17 (34%) women had score of 8 or less, indicating that depression was not likely. Score of 9-11 was seen in 13 (26%) women suggesting that depression is possible and that these women need to be re-screened in 2-4 weeks. Three (6%) women were at fairly high possibility of depression with a score of 12-13. Seventeen (34%) women were screen positive for depression with 14 and higher score and were advised evaluation for the probable depression by the specialist. Question 10 of EPDS score had a positive score in 6 (12%) women and these women were also referred to the specialist.

Conclusion: By this study the mental health of pregnant females during covid-19 pandemic was assessed using validated questionnaire. Timely evaluation by the specialist in women identified to be at a high risk for developing psychological disorders can benefit these women.

[OTH1]

Embryological Insights into Vaginal Atresia: A case report

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Introduction: Embryological development of vagina occurs by the fusion and subsequent canalization of two structures- Mullerian duct system and Urogenital Sinus. During embryonic development of vagina, depending upon the contributing structure which is affected and the stage at which the development is harassed vaginal anomaly may present as imperforate hymen, transverse vaginal septum, longitudinal vaginal septum, partial vaginal agenesis and complete vaginal agenesis.

Case Report: A13-year-old girl presented with cyclical lower abdominal pain and increased frequency of micturition for past four months. She had not attained menarche yet; her breast was Tanner stage II and pubic hair were normal for age. She had normal intelligence. Examination revealed a midline lower abdominal mass, 14 weeks gravid uterine size arising from pelvis. No hymenal bulge seen in local examination. However rectal examination revealed a bulge felt high up 5-6 cm from anal verge. Provisional diagnosis of crypto menorrhoea due to vaginal agenesis or transverse vaginal septum was made. Ultrasound and MRI revealed hematometra and hematocolpos in upper vagina. Examination under anaesthesia revealed a 1cm blind vagina. Rectovaginal space was dissected for 6-7cm and cervix visualized. Hematometra drained. Split thickness skin graft was placed with foleys in uterine cavity. Final diagnosis of partial vaginal agenesis (U0C0V4) was made.

The case was studied and followed in light of knowledge gathered from recent studies on embryological vaginal development and it was concluded that most of the vagina develops from urogenital sinus epithelium and only the small upper portion of vagina restricted to fornixes develops from mullerian ducts. Vaginal atresia can be of two types complete vaginal agenesis and partial vaginal agenesis. Complete vaginal agenesis also known as MRKH syndrome, is due to mullerian anomaly whereas partial vaginal agenesis is a variant of transverse vaginal septum and is a urogenital sinus anomaly. Partial vaginal agenesis is an extremely rare condition (incidence of 1:70000) as compared to MRKH (incidence 1:4000). Vaginal atresia in MRKH is **associated with other mullerian anomalies like cervical agenesis, hypoplastic or absent uterus. Contrary to this partial vaginal agenesis is associated with vesicovaginal fistula, rectovaginal fistula and cloacal anomalies**. Each case of vaginal atresia must be essentially differentiated as complete or partial vaginal agenesis as these two are completely different entities with respect to embryological development, associated anomalies/syndromes, patient counselling and treatment outcomes.

[OTH5]

Uterine Vascular Malformation: a rare case with associated RPL

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Introduction: Uterine arterio-venous malformation (AVM) is a rare condition. It results from the formation of multiple arteriovenous fistulous communication within the uterus without an intervening capillary network. AVM can be congenital and acquired. Acquired AVM are often the consequence of previous uterine trauma such as curettage procedure, cesarean section or pelvic surgery. Typical presentation is vaginal bleeding. Despite being rare, it is a potentially life threatening disease, as patient may present with profuse bleeding.

Case: We herein report a 33 year old G14P1L1A12 lady, with history of one full term LSCS and 4 Dilation and Evacuation, who was referred for Missed abortion and USG suggestive of Uterine Arteriovenous malformation. She had a significant history of secondary Recurrent Pregnancy Loss (RPL). MRI and Contrast CT Angiography was performed to confirm the diagnosis. CECT angiography was suggestive of AVM with hematoma with

cesarean scar defect. As per the cardiology opinion, embolisation was advised only if the patient bleeds profusely. But the patient had no complaint of bleeding p/v and so she was observed with serial ultrasounds. Patient has resolved spontaneously and has restored normal menstrual cycle.

Conclusion: Uterine AVM is an important differential diagnosis to be considered in case of unexplained vaginal bleeding. The management should be individualized taking into account the need for future fertility and hemodynamic status. The vast majority of uterine AVM resolve spontaneously or with medical treatment. The remaining cases usually respond to conservative management options. Normal menstrual cycle and fertility is restored in majority of women with this condition.

[OTH8]

Paraneoplastic Encephalitis Associated with Teratoma of Ovary

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Introduction: Paraneoplastic Encephalitis (PNE) is the neuropathological disorder of central nervous system, associated with a remote tumor, which presents with diverse of neuropsychological symptoms. Ovarian teratomas are frequently described in patients with paraneoplastic encephalitis, yet paraneoplastic encephalitis is rarely described in patients with ovarian teratomas. Understanding why a minority of patients with teratomas are seen with autoimmune encephalitis may improve the management.

Case Report: We report the case of 23 year old married nulliparous female presented to the gynaecology OPD with with mass per abdomen since 4 months with acute psycosis, memory loss and cognitive impairement since 5 month. Symptoms were not relieved on antipsycotics. On abdominal examination, a mass of 28 weeks size was palpable, which was firm, non tender, smooth with regular well defined margins and side to side mobility was present. USG abdomen and pelvis showed a large solid-cystic well defined heterogeneously echogenic lesion of size 12x7.2cm with multiple cystic areas along with internal vascularity, likely arising from right adnexa suggestive of Germ cell tumor (Teratoma) leftovary was normal. CECT abdomen and pelvis sugessitive of Mature ovarian cystic teratoma with possibility of malignant transformation. Psychiatry, neurology referral was done. MRI brain showed ishaemic changes. Patient was taken up for staging laparotomy with U/L oophrectomy. intraoperatively right ovary normal in size with Deposits noted over the surface. Mass arising from left ovary 20x17cm lobulated firm adhered to omentum with breech in the capsule. Multiple peritoneal implants were present. Tumour along with all biopsy samples were sent for HPE.

Gross Examination of Specimen: 20x17cm lobulated soft to firm mass capsule intact. Cut section showed solid (with areas of bone and cartilage formation) with intermittent cystic areas(filled with serous and mucinous fluid). Post operatively patient is recovering and planned for chemotherapy after Histopathology report. Patient will be followed for improvement of psychosis symptoms.

Conclusion: Paraneoplastic encephalitis is a critical yet reversible illness. Our comprehensive review and experience can be summarized in the following guidelines signifying the current clinical practices regarding PNE with ovarian teratoma. (I) PNE should be suspected in female patients presenting with an acute history of neuropsychiatric symptoms. (II) Tumor resection should be performed earliest to improve patient outcomes.

[OTH9]

Vaginoscopic Resection of Oblique Vaginal Septum in An Unmarried Female with Ohvira Syndrome

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Introduction: OHVIRA Syndrome is a rare mullerian duct anomaly which consist of a triad of uterus didelphys, obstructed hemivagina and ipsilateral renal anomaly.

Case: A 12 years old girl presented with pain in abdomen for one month. She attained menarche 6 months back and had a regular menstrual cycle. Cycles were associated with pain in lower abdomen which gradually increased with every cycle. Her general and systemic examination was unremarkable. External genitalia was normal. Vaginal examination was not done. On rectal examination, a bulge was felt on right side 5cm above anal verge and its upper limit was not reachable. USG and MRI revealed absent right kidney with uterine didelphys with right side hematosalpinx, hematometra and hematocolpos. Vaginoscopic examination was done with a hysteroscope and bulge was identified. Transverse nick was given over oblique vaginal septum and collected blood was drained and a silicone catheter was put in the newly created opening. Follow-up USG on 2nd day showed a complete disappearance of hematosalpix, hematometra and hematocolpos. Surgical outcome was satisfactory. Patient was discharged with a drain attached to prevent stenosis of newly created opening. On follow-up visits, patient was mensturating from the drain without any abdominal pain.

Conclusion: Vaginoscopic resection on oblique vaginal septum is a novel technique of management with minimal intervention and presevation of hymen in the nulliparous, young, unmarried, sexually inactive female.

[OTH11]

Giant Mucinous Cystadenoma of Ovary and Mucinous Cystadenoma Appendix in Perimenopausal Women

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Introduction: Ovarian cystadenomas are cystic neoplasm lined by mucin producing epithelial cell. Mucinous cystadenoma of the appendix is a rare condition that develops as a result of proliferation of mucin-secreting cells in an occluded appendix. It is found in 0.2-0.3% of resected appendices and 3% of ovarian mucinous cystadenomas are associated with appendiceal involvement. Benign disease such as cystadenoma,

dissemination of mucin-producing cells into the peritoneal cavity can cause pseudomyxoma peritonei. Since its diagnosis in terms of malignancy or benignity is difficult before surgery, it is important to remove it without rupture of the lesion.

Case Report: A case of a 45-year-old P2L2 with a ten-month history of increasing abdominal girth and abdominal pain. Abdomino-pelvic ultrasound and computed tomography scan revealed a large pelvico abdominal lesion with multiple septae of size 35.5x18.6x13.9cm. Serum markers were normal. The patient underwent laparotomy, resection of left ovarian cyst and hysterectomy with unilateral salphingo-opherectomy. Appendix examined, per op was enlarged and tense simultaneous appendicectomy was also done, bowel, omentum and other abdominal organs appeared healthy. The removed huge mucinous cystadenoma, was weighing 6 kg and measuring 30x15cm. Histopathological report confirmed mucinous cystadenoma of both ovary and appendix. Her post-operative course was uneventful.

Discussion: A study by ozcan et al concluded that during surgery for an ovarian mucinous neoplasm, no primary or metastatic appendiceal tumour of mucinous histology was identified, if the appendix was grossly normal and no evidence of pseudomyxoma peritonei was encountered. In borderline ovarian tumours other studies by Rosenthal et al have concluded that failure to perform appendicectomy in mucinous ovarian neoplasm is associated with worse prognosis.

Conclusion: Studies have shown that appendectomy is not a necessary additional procedure in the presence of benign or borderline unilateral ovarian mucinous tumours with normal peritoneal and appendiceal morphology, but per op assessment of morphology of appendix should always be done. The decision about an additional appendectomy is based on the surgeon's choice, depending on the gross morphology of the appendix or associated pseudomyxoma peritonei at surgery.

[OTH21]

Primary Infertility with Fibroid Uterus and Pituitary Microadenoma

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Introduction: Infertility affects nearly one in 6 couples and requires detailed. evaluation of the couple.Female factors include ovulatory disorders, Endometriosis, Pelvic adhesions, Tubal blockage, Other tubal or uterine abnormalities (Fibroid) and endocrine disorders like hyperprolactinemia etc. hyperprolactinemia along with fibroid is seen rarely and is a clinical dilemma.we are presenting a similar but rare case.

Case: A 33 yr old nulliparous female, 12 yrs marital life with mass per abdomen presented to out patient department with infertility.After admission, Infertility workup was done. semen analysis, ovarian function and reserve assessment, endocrinological serum studies were found to be normal except for elevated serum prolactin levels(1676ng/ml)and MRI whole abdomen showing 11x24x30cms, large sub serosal fibroid arising from fundus and anterior wall of uterus with with adjacent dilated uterine and para uterine vessels with mild bilateral hydronephrosis. MRI-Brain with Pituitary was done and it showed 2x2.5mm small hypo enhancing area in anterior pituitary with normal study of brain parenchyma. Patient was managed conservatively for microadenoma with Tab Cabergoline 0.25mg twice a week for 2 months and serum prolactin levels decreased (598.6ng/ml). Laparotomy (Myomectomy) after frozen section done.18x20cm massseen. post operative period was uneventful and patient was discharged.

Conclusion: Fibroid is very common condition in infertility case and its surgical management can be complicated by associated medical conditions. Hyperprolactinemia due to pituitary microadenoma, rare cause also to be ruled out and managed well either medically (microadenomas) or surgically (macro adenomas) as per requirement. In patients with prolactinoma, dopamine agonists, especially cabergoline, are quite efficient. Dopamine agonists decrease plasma prolactin levels and induce shrink age in most patients and can be ceased in some of them. Macroadenomas (more than10mm) with pressure effects requires surgical management.

[MI6]

Spontaneous Uterine Rupture In A Postmenopausal Female: A Rare Entity

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Introduction: Spontaneous uterine rupture is common in a scarred uterus during pregnancy or due to malignancy in post menopausal women. In postmenopausal women spontaneous uterine rupture is rarely seen in clinical practice. We present a rare case of a postmenopausal woman who came with acute abdomen and posed a dilemma for diagnosis and management.

Case Report: A 60 yr old P5L5 postmenopausal woman presented with complaints of foul smelling discharge for past 1 month, severe pain lower abdomen and vomiting associated with abdominal distension for 3 days. No history of any intervention could be elicited.

On examination, patient was conscious but sweating and cold, clammy skin. Her PR was 120/min, BP was 70/40 mm Hg, no pallor, bilateral basal crepts were present in lungs. On per abdominal examination generalised and rebound tenderness and guarding was elicited, no lump or organomegaly detected. Per vaginal examination revealed cervix flushed with vagina, with firm retroverted 8 weeks size uterus and bilateral fornices free and non tender.

Abdominal and chest X-ray showed dilated large bowel loops but no gas under diaphragm. Transabdominal ultrasound revealed mild collection in uterine cavity with moderate ascitis. A confirmatory CECT was done which revealed fluid collection in pelvis and thinning of anterior uterine wall and multiple air fluid levels.

Patient was in septic shock with acute kidney injury with fluid overload hence was started on vasopressors and antibiotics. A multidisciplinary team consisting of gynaecologists, physicians and anaesthetists was formed. After stabilising, the patient was taken up for emergency exploratory laparotomy. Intraoperatively 200 ml pus was drained from pelvis. A 2x2 cm perforation was noted on the anterior uterine wall on body and partially adhered bowel loops. Total abdominal hysterectomy

with bilateral salpingo-oophorectomy was performed. She received 2 Packed Red blood cells and 2 Random donor platelets. Bowel was explored and was normal.

Postoperatively patient received intensive care unit care for 20 hours in view of poor respiratory efforts and ionotropic support for stabilization. After wards she developed bilateral pleural effusion which was tapped under USG guidance. CECT chest showed features of aspiration pneumonitis with multiple calcified nodes. A clinical suspicion of Tuberculosis was made and was patient was then started on ATT. She was discharged after 10 days after recovery in stable condition.

HPE of uterus revealed transmural fibrinoid necrosis, acute inflammatory infiltrates and serositis. No evidence of malignancy. AFB was not demonstrated in the specimen. Pus culture was sterile. Patient completed her ATT for 6 months and is now under follow up and symptom free.

Conclusion: Spontaneous uterine rupture as a consequence of pyometra in postmenopausal women is a rare entity. The clinical presentation is often misdiagnosed and delay in diagnosis leads to high mortality and morbidity in these patients. Hence a differential diagnosis of spontaneous uterine rupture should be kept in mind in a postmenopausal woman presenting with acute abdomen.

AOGD Subcommittees Activities

From 1st April, 2020

Breast and Cervical Cancer Awareness Screening and Prevention Committee

Dr Sushma Sinha

1. On 01:08:2020 to 07:08:2020 - Sensitization of different strata of HCW about the importance of Breast Feeding. Health talks and small group discussions. Drawing, Painting and slogan competition events.
2. June and July -Celebrated world population month-public awareness on the importance of health of woman.
3. Talk on breast lump in west district involving public and private doctors.

Infertility Committee

Dr Kavita Aggarwal

1. On 29th July, 2020 - Webinar on PCOS and Infertility.
2. On 2nd August 2020 - Webinar on Diagnostic and Management Dilemmas in infertility.
3. On 24th August 2020 - Endometriosis-Ending the endless Enigma.
4. On 6th September 2020 - Masterclass on Fibroids and infertility.
5. On 16th September 2020 - Webinar on Recurrent Pregnancy Loss/ Recurrent Implantation Failure.
6. On 4th October 2020 - Webinar on Return of fertility care in Covid times and Optimising IUI success.
7. On 10th October 2020 - Webinar on Oncofertility.

Rural Health Committee

Dr Seema Prakash

1. On 19/09/2020 & 20/09/2020-First International webinar on Covid-19 Public Awareness.
2. On 08/10/2020-Webinar Menstrual Disorders & PCOD.

Endometriosis Committee

Dr Manju Khemani

1. On 18th May 2020-Endometriosis-Different Scenarios, Panel discussion moderated by Dr. Madhu Goel, National & International panelists, virtual CME and talk on Endometriosis Paradigm Shift by Dr Manju Khemani.
2. On 18th August 2020 - Panel Discussion on Endometriosis moderated by Dr Madhu Goel.
3. On 25th August 2020 - Talk on Endometriosis Paradigm Shift by Dr Manju Khemani.
4. On 27th August 2020 - Freedom from Endometriosis, Panel discussion by Dr Kiranjeet Kaur, Expert Chairperson Dr Manju Khemani.
5. On 30th August 2020 - International Webinar on Endometriosis- An Elusive Challenge.

Multidisciplinary Patient Care Committee

Dr Shashi Lata Kabra

1. On 13th June 2020 -e-CME on Present Practices in COVID Pregnancy.
2. On 11th July 2020-Webinar on Placenta Accreta Spectrum Disorder.
3. On 28th July 2020 -Webinar on Role Of Nutrition During Pregnancy.
4. On 06th August 2020 - Programme on Breast Feeding for Patients at DDUH.
5. On 06th August 2020-Webinar on Revisiting the genes behind gynaecological cancers-implications in clinical practice.
6. On 13th August 2020-Webinar on Birth defects and prevention.
7. On 26th August 2020-Public awareness lecture on Menopause and Recurrent UTI.
8. On 27th August 2020 – Case discussion on Radical vulvectomy and bilateral inguinofemoral LN dissection in a case of carcinoma vulva.
9. On 28th August 2020-Health talk on Menopause.
10. On 03rd September 2020 -Panel discussion on PPH.
11. On 05th September 2020 – Webinar on Evidence based management of maternal sepsis.
12. On 08th September 2020 -Webinar on Emergency Contraception.
13. On 08th September 2020 – Panel discussion on Contraception in various stages of women's life and in special cases.
14. On 22nd September 2020 -Webinar on Role of

vitamin D in women's health and Breast carcinoma –what a gynaecologist should know.

15. On 28th September 2020-Webinar Ovarian Factor Evaluation & Ovarian Reserve Testing-Practical Tips & Tricks.
16. On 03rd October 2020-Webinar on Noor: Embracing Femininity.
17. On 10th October 2020-CME on Gynaecological oncology.

Oncology Committee

Dr Amita Suneja

1. On 4th July 2020-Webinar on PAP & LBC Laid bare.
2. On 5th July 2020-Webinar series on "Updating skills in Cervical cancer prevention".
3. On 2020-Capacity Building of Medical and Paramedical staff (Screening of Cervical, Breast and Oral Cancer).
4. On 26th October 2020-Video workshop on Updating Survival Skills in Gynaecologic Oncology.

Activities of Adolescent Health Committee

Dr Kiran Aggarwal

1. On 4th May 2020-Public forum on Adolescent health in Rotary meeting.
2. On 10th August 2020 -FOGSI national E Conclave celebrated the International Youth Day.
3. On 28th -30th August 2020-FOGSI International E conference on.
4. On 30th August 2020 -Panel on PCOS in Adolescence
5. Contributed as AOGD Adolescent health chairperson to book on FAQ, Frequently asked questions for Boys and Girls.
6. On 29th August 2020-Dr. Alisha Sethi from LHMC won third prize in paper presentation in FOGSI International E conference.

Reproductive Endocrinology Committee

Dr Anita Rajorhia

1. On 08th July 2020 – Webinar on The surging hormones.
2. On 16th July 2020 – Webinar on current updates in contraception.
3. On 27th July 2020 – Webinar on role of progesterone in peri-conception period, LPD and ovarian rejuvenation.
4. On 02nd August 2020-Webinar on Fertimax: Endocrine disorders.
5. On 21st August 2020-Webinar on pregnancy & working women.
6. On 29th August 2020-Webinar on Pregnancy management with medical conditions.
7. On 17th September 2020-Webinar on Transcending Hormones on understanding of Endocrinology of PCOS.
8. Dr. Anita Rajorhia has contributed a chapter on Thieves of sexual health, future fertility & reproductive outcomes in FOGSI Focus on adolescent health.
9. Dr. Anita Rajorhia contributed in videos on adolescent counselling, contraception awareness and breast feeding made by respective FOGSI societies.

Fetal Medicine and Genetics Committee

Dr Manisha Kumar

Work up of Stillbirth

- Management Objectives in Stillbirth
- To confirm the IUD
- To give the news
- To find the cause
- To give advice for future pregnancy

Activities Under Safe Motherhood Committee

Dr Jyotsana Suri

1. On 11th April 2020-Live Video Demonstration done on proper donning and doffing of PPE.
2. On 22nd May 2020 -World preeclampsia day.
3. On 31st May 2020-Webinar on Challenges in Management of COVID Positive and Negative Pregnant Women during COVID Pandemic.
4. On 11th June 2020-Panel discussion on Placenta accreta spectrum disorder.
5. On 13th June 2020-Webinar on COVID-19 in pregnancy.
6. On 19th July 2020-Webinar on HELLP syndrome.
7. On 26th July 2020-Webinar on Heart Disease in pregnancy.
8. On 28th July 2020 Webinar on Hypertensive Disorders of Pregnancy.
9. On 31st July 2020-Webinar on Induction of labour and PPH.

10. On 5th August 2020-Webinar on Case Based Challenging Situations in Breast Feeding A webinar on sepsis to commemorate the World Breast Feeding Week.

Endoscopy Committee

Dr Richa Sharma

1. On 19th June 2020-MTP Sequelae and Hysteroscopy (Asherman's syndrome & RPOC).
2. On 3rd, 4th, 5th 12th and 18th July 2020 - Masterclass on Fertility Enhancing Endoscopic Surgery.
3. On 13th August 2020 - Webinar on Gynae Surgical Skills Enhancement, 1st series.
4. On 14th August 2020 - Webinar on Gynae Surgical Skills Enhancement, 2nd series.
5. On 16th August 2020 - Webinar on Gynae Surgical Skills Enhancement, 3rd series.
6. On 15th August 2020 - Public Awareness Campaign.
7. On 17th August 2020Tutorials on Laparoscopic Cystectomy
8. On 18th August 2020-Tutorials on TLH was organized
9. On 19th August 2020-Panel Discussion Hysteroscopy: "Averting complications and Dealing safely" Case based discussion
10. On 25th September 2020 - Endoscopy Summit
11. On 28th September 2020 - Endoscopic Summit
12. On 5th October 2020 - Endoscopy Fiesta

QI Committee

Dr Manju Puri

1. On 23rd April 2020-Webinar on Dispelling COVID related Myths Empowering Obstetricians.
2. On 14th May 2020-Webinar on COVID care in Pregnancy
3. On 30th May 2020-Webinar on Perspectives in COVID 19 in relation to antepartum, intrapartum, and postpartum Care: Q and A session
4. On 14th August 2020-QI presentation on Preventing Admission of asymptomatic COVID 19 positive patients in Green Zone in a heavy load public Facility in the AOGD monthly meeting
5. On 9th Sep 2020 - Webinar on QI in COVID times for postgraduate students.
6. On 5th Nov 2020 - AOGD Preconference workshop on Care Bundle for Multiple pregnancies: Ensuring Quality Care.

Supporting Pharmaceutical Companies

Abbott India Limited

Akcent Health Care

AstraZeneca Pharma Ltd.

Emcure Pharmaceutical Ltd.

GlaxoSmithKine Pharmaceuticals Ltd.

India Medtronics Pvt. Ltd.

Intas Pharmaceuticals

Jagsonpal Pharmaceuticals Ltd.

Life Cell International Pvt. Ltd.

Lifestar Pharma Pvt. Ltd.

Merck Specialties Pvt. Ltd.

Plus plus

Stryker India Pvt .Ltd.

Sun Pharma Laboratories Ltd.

Walter Bushnell Laboratories Pvt. Ltd