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AOGD BULLETIN



**Quality Care in
Obstetrics and Gynaecology**

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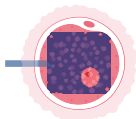
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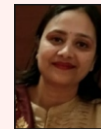
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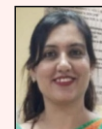
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From the AOGD Office



Dr Amita Suneja



Dr Abha Sharma



Dr A G Radhika

Dear Friends

The month of March brings spring, sunshine, soaring spirits, and International Women 's Day (8 th March). Wishing you all strength, courage, and support as you dream big on this day.

This is AOGD's last month at UCMS & GTB Hospital, we reflect on the past year and feel proud and accomplished for bringing our members together on several initiatives, such as workshops and CMEs for AOGD committees, partnerships with other societies, standalone CMEs, and of course our very successful conference and pre-congress workshops. Interactions with FOGSI have been very close this year.

The AOGD - FOGSICON was a great success. Delhi won the bid to host AICOG 2026!

Let us continue with our endeavour, as responsible members of society, to promote universal health, such as prevention & appropriate management of cancers, diabetes, hypertension, adolescent health, safe sexual practices, and caring for antenatal mothers. There have been important informative sessions on contraceptives including one on Implanon in February.

The editors need to be applauded for bringing out informative issues month after month. The bulletin this month deals with 'Quality Care in Obstetrics and Gynecology'. It promises to cover the subject well and throw light on crucial management strategies.

The online clinical meetings allow people who find it difficult to attend due to distance or time constraints to follow interesting cases and discussions online. Of late, there have been few requests for in person meeting too therefore, we have planned to have the last meeting at UCMS & GTB Hospital.

Please join us at Lecture Theatre-1, UCMS College Block at 1pm on 27th March 2024 for lunch followed by the General Body Meeting, felicitations, and the clinical meeting. We will hand over the reins to the new office-bearers.

Please note that the date is 27 th (Wednesday)

Cheers!

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From the Editor's Desk



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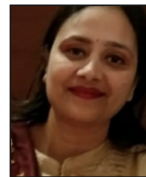
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Respected Seniors and dear friends

Spring season greetings to all!

Amid pleasant weather, warm sunshine and blooming flowers, we present to you the March bulletin. The theme of this month is Quality Care in Obstetrics and Gynecology. It contains informative articles on quality assurance checklist for care around birth, prehabilitation in gynecologic surgeries, an algorithm on ERAS protocol and lucid description of safe blood transfusion practices. An article on holistic approach to well-being by integrating naturopathy and yoga is worth reading. Use of telemedicine as an emerging tool for health care in Obstetrics and Gynecology has been included. Snapshot section has a link to PPH drill and in 'Dil Se' the eternal desire of a woman to remain beautiful has been expressed.

Happy reading & wishing you bright and colorful Holi!

Editorial team

AOGD (2023-2024)

Prehabilitation in Gynaecological Surgeries

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Introduction

It is a well-known fact that, preoperative physical and psychological health are good predictors of postoperative outcomes. Prehabilitation, a proactive approach, aims to optimize the physical, mental, emotional health and prepares the patient prior to the surgical procedure. Prehabilitation doesn't have a single definition or approach. However, the success of prehabilitation depends on various factors like identification of patients who may benefit from it, enrolling them in a good prehabilitation programme, patient's compliance and adherence to the programme for an adequate period before surgery and so on. There are knowledge gaps existing even in this era on the prehabilitation among clinicians, researchers, and patients.

While prehabilitation has been traditionally associated with orthopaedic and cardiac surgeries, its benefits are gradually being recognized in gynaecological surgeries as well. In this comprehensive discussion, we will explore the concept and evidence related to prehabilitation in the context of gynaecological surgeries, its objectives, components, evidence-based interventions, and its potential impact on patient outcomes.

Gynaecological surgeries encompass a wide range of procedures, including hysterectomy, myomectomy, oophorectomy, pelvic organ prolapse repair, gynaecologic oncology surgeries and so on. Prehabilitation involves multidisciplinary interventions aimed at enhancing patients' physiological reserve, functional capacity, psychological well-being, and perioperative outcomes.

A. Objectives of Prehabilitation

The primary objectives of prehabilitation include:

- 1. Optimization of physical fitness:** Improving cardiovascular health, muscular strength, flexibility, and endurance to enhance tolerance to surgery and facilitate postoperative recovery.
- 2. Psychological preparation:** Reducing anxiety, stress, and fear related to surgery through education, counselling, and relaxation techniques, thereby promoting better coping mechanisms and adherence to treatment.
- 3. Nutritional support:** Addressing malnutrition, obesity, or other nutritional deficiencies to optimize healing, immune function, and wound healing.
- 4. Smoking cessation:** Encouraging smoking cessation to reduce perioperative complications, improve wound healing, and enhance overall surgical outcomes.
- 5. Pain management:** Implementing strategies to manage pre-existing pain conditions and educate patients about postoperative pain management techniques, including pharmacological and non-pharmacological interventions.
- 6. Others:** Prehabilitation may also include education and awareness among the patients and care givers regarding early ambulation after surgery, the continuation of the prehabilitation exercises in the postoperative period which will help in their early postoperative recovery.

B. Why is Prehabilitation required?

Prehabilitation is required preoperatively because it improves the patient's flexibility to withstand not only the disease itself, but also the treatment related stressors and accelerates the posttreatment recovery back to baseline¹. The following figure demonstrates this concept:

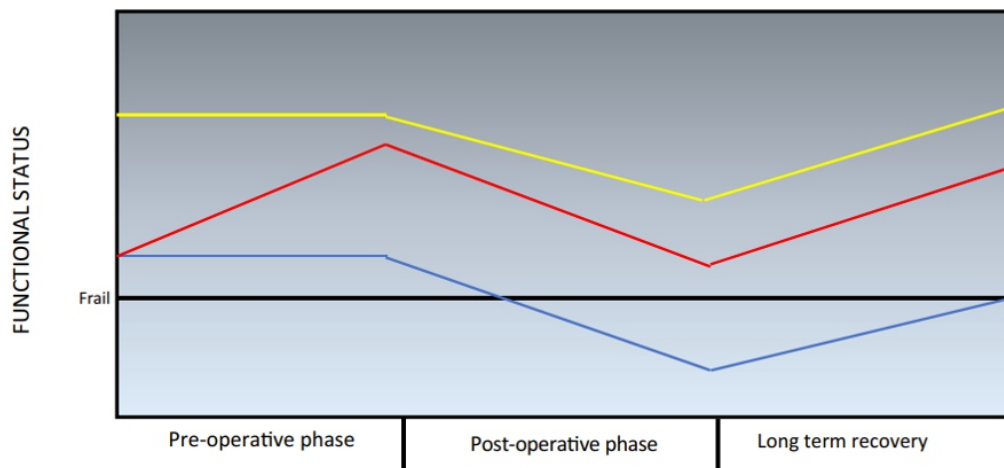


Figure 1: Concept of Prehabilitation¹

The above figure (Fig.1) tells that, in a patient who is prefrail or frail (red line), if she undergoes a prehabilitation program, she recovers to baseline post-surgery whereas, patient who is prefrail or frail (blue line) and has not undergone prehabilitation will not be able to recover to the baseline after surgery. The patient who is normal (yellow line) copes well even with no prehabilitation program. So, assessments have to be made preoperatively to identify the frail and prefrail group and institute prehabilitation interventions in them to improve their outcomes. This concept of frailty is more applicable in gynaecological oncology patients where the disease itself is a major stressor¹. It is found that frailty is associated with poor overall survival, treatment related morbidities and so on.

C. Preoperative assessment:

As mentioned earlier, the success of prehabilitation program lies in the appropriate selection of candidates. Preoperative assessment in terms of frailty, baseline functional, nutritional, psychological status becomes important because they help to assess or select candidates who will be best benefited with prehabilitation programs.

C.1 Frailty assessment: There are several tools to assess frailty objectively with their own advantages and disadvantages. Few commonly used tools are deficit index Edmonton frailty index, the Comprehensive Geriatrics Assessment etc¹. None of the tool is gold standard.

C.2 Functional assessment: It includes objective assessment of patient's baseline physical ability. It includes timed up and go (TUG), 5 chair rise, 6 min walk test (6-MWT) or the short performance physical battery (SPPB), hand grip strength and so on (1). All the above tests assess only the physical ability not the social, emotional and psychological aspects. Exercise capacity of the individual at baseline can be assessed by cardiopulmonary exercise testing (CPET). But, CPET demands sophisticated instruments and expertise. The 6-MWT is considered a good screening tool and is also validated in many preoperative patients. It assesses the maximum distance the patient can walk with moderate intensity at 6 minutes. This also correlates with the maximum oxygen consumption (VO₂max). When a patient walks less than 350 meters in 6 minutes, they are considered as low physical ability and are at high risk of postoperative morbidities especially cardiac and pulmonary complications. Hence, in such patients prehabilitation has to be initiated in the form of chest physiotherapy or incentive spirometry. Timed up and go (TUG) is also a physical activity assessment in which the time required by a patient to start sitting, stand, walk a distance of 10 ft, turn around, walk back and sit down is calculated. This test can also be done in gynaecological patients for prehabilitation. It is generally recommended that each institution choose a particular test and incorporate in their prehabilitation screening program to identify patients who will require prehabilitation prior to

surgery.

C.3 Nutritional assessment: Adequate nutrition helps in wound healing, postoperative recovery and so on. Correction of anemia and hypoalbuminemia is of paramount importance in the nutritional aspect of prehabilitation as they cause severe postoperative morbidities if not dealt at the right time. There are many nutrition screening tools designed for this assessment. Among them, most frequently used tool is malnutrition universal screening tool (MUST) and preoperative nutrition score (PONS). MUST is validated and it accurately detects malnourished patients. It assesses the patient's BMI, nutritional intake for 5 days and weight loss and incorporates all of them into a score. Based on the score, patients can be allocated to routine care, close observation, or treatment groups. In addition to these nutritional assessment tools, few studies on colorectal surgeries have mentioned Computed tomography (CT) also as a screening tool for nutritional assessment (1). This is done by evaluating the CT images and look for the presence of sarcopenia or myosteatosis. In gynaecologic cancers, myosteatosis has been shown to predict poor outcomes.

C.4 Psychological assessments: Mental health assessment is very important in the preoperative period as patients with poor mental health are more prone to adverse events postoperatively. So, the preoperative period is the golden period to reduce stress and support them emotionally and mentally. All surgical patients should undergo psychological assessments preoperatively by a validated and simple screening tool. The most commonly used scales in practise are Hospital Anxiety and Depression scale (HADS) scale and Depression, Anxiety, Stress Scale-21 (DASS-21).

D. Components of Prehabilitation

After all the complete assessments, at risk patients are channelized through a proper personalized prehabilitation program with interdepartmental collaboration. Current practice across all the institutions is commencement of prehabilitation programs 1-2 weeks prior to surgery and continuing it 4-6

weeks after surgery. However, there are no recommended duration in any of the guidelines. Another important point to note is, prehabilitation is different from medical optimization, such as glycemic control, hypertension control, weight loss etc as these are suggested for every preoperative patient. Literature review suggests that this integrated comprehensive multimodal approach is well accepted by patients waiting for all types of surgeries. The professionals who will be included in delivering this multimodal prehabilitation are gynaecologists, physiotherapists, dieticians, psychologists and nurse counsellors.

The interventions in the prehabilitation programs are:

D.1 Preoperative optimization of co-morbid illness: Screening and management of chronic illnesses such as hypertension, diabetes, obesity, and cardiovascular disease to minimize perioperative risks and improve surgical outcomes.

D.2 Education and empowerment: Provision of information about the surgical procedure, anaesthesia, potential risks and complications, postoperative care instructions, and self-management strategies. Empowering patients to actively participate in their care and decision-making process.

D.3 Exercise intervention: The most common physical intervention in prehabilitation programs for patients undergoing gynaecological surgeries is inspiratory muscle training (IMT). IMT is performed at 15-30 minutes daily sessions using an incentive spirometer or by simple daily home breathing exercise. IMT has shown huge differences in postoperative recovery after major abdominal surgery in terms of reduced postoperative pulmonary complications in the colorectal, cardiac surgeries. However, till date there is no data in gynaecological surgeries perse. The other physical intervention methods include tailored aerobic exercises, brisk walking, muscle strengthening with body weight alone or with light weights or by using resistance bands. These interventions should be commenced

preoperatively and continued in the immediate postoperative period and after discharge as well. These interventions can be home based or under the supervision of health professionals. At all times, prospective monitoring of the programmes with feedback is essential for improvement.

D.4 Nutritional intervention: Nutritional intervention should go hand in hand with the exercise to get the maximum effect. Studies have shown that, in patients undergoing abdominal, cardiac, orthopaedic surgeries carbohydrate treatment preoperatively reduces the length of hospital stay when compared to placebo¹. Nutritional supplementation for 14 days before abdominal surgery significantly reduced the postoperative complications. It includes involving the dietician and providing adequate food intake, use of protein supplements, micronutrient supplementation, and hydration. This in addition with regular exercise promotes a positive protein balance in muscle and attenuates postoperative lean body mass loss.

D.5 Psychological intervention: It include methods to reduce anxiety such as relaxation and breathing exercises. They can be done on a daily basis at home and the patient can be advised to attend yoga, meditation or any other form of relaxation and personal control. Cognitive-behavioural therapy, mindfulness-based stress reduction, relaxation techniques, and peer support groups to address anxiety, depression, and other psychosocial factors impacting surgical outcomes.

D.6 Cessation of adverse health behaviours support programs: Behavioural counselling, pharmacotherapy, and support groups to assist patients in quitting smoking/alcohol abuse before surgery. This may involve nicotine replacement therapy, prescription medications, and motivational interviewing techniques.

The following table (Table 1) summarizes the trimodal prehabilitation screening and intervention tools

Evidence-based Interventions:

Several studies have demonstrated the effectiveness of prehabilitation interventions in

Table 1: Trimodal Prehabilitation screening and intervention tools¹

Component	Screening tools	Intervention
Functional	-6MWT -CPET -TUG -Handgrip strength -5 chair rise -SPPB	-Aerobic exercise -Strength exercise -Flexibility exercise -IMT exercise
Nutritional	-MUST -Albumin -CT body composition	-Dietary recommendation/awareness -Protein supplementation - Referral to dietician
Psychological	-HADS -DASS-21	-Relaxation exercise -Breathing exercise -Mindfulness - Psychotherapy

improving post operative outcomes.

A systematic review by Florian Ebner et al in 2018 on prehabilitation in gynaecological surgeries which included 5 articles concluded that patients who had prehabilitation before hysterectomies had early discharges from the hospital. Since the number of articles was very less, the authors recommended from the gynaecologic point of view prehabilitation still needs further studies to clarify the benefit for the patients. A single blind RCT done by Frawley et al. in pelvic organ prolapse patients on pelvic floor prehabilitation (pelvic floor exercises done seven sessions prior to surgery) with outcomes measured in terms of bladder symptoms and pelvic floor muscle strength measurement in postmenopausal women showed that there was no significant difference in the bladder symptoms, between the two groups. However, hospital stay, recovery times were not mentioned specifically in the study^{3,4}.

A systematic review by Santa Mina et al reported that prehabilitation programs incorporating exercise, nutritional counselling, and psychological support were associated with reduced length of hospital stay, decreased postoperative complications, and improved physical functioning in patients undergoing gynaecological cancer surgery⁵.

Additionally, a randomized controlled trial by Barberan-Garcia et al. (2019) demonstrated that prehabilitation with aerobic and resistance training prior to major abdominal surgery resulted in a reduction in postoperative

pulmonary complications and healthcare utilization in gynaecological and other surgical patients⁶.

Mc Isaac et al did an umbrella review on prehabilitation among the adult patients who were undergoing surgery, in terms of their health, experience and cost outcomes. This included patients with benign and malignant conditions⁷. The certainty of evidence was assessed using Grading of Recommendations Assessment, Development and Evaluation (GRADE). They found beneficial effects of prehabilitation in decreasing complications, improving functional recovery, reducing risk of non-home discharge, and reducing length of stay. However, when assessing the certainty of evidence by GRADE, they found that cancer surgeries had moderate certainty of functional improvement with prehabilitation whereas benign cases had low to very low certainty improvement with it⁷. Therefore, across all surgical specialities, robust prehabilitation research is likely to be high impact for all stakeholders in perioperative medicine.

A single blind RCT done by Noordegraaf et al where 215 patients who underwent benign gynecological surgeries like hysterectomy or laparoscopic surgery for benign adnexal masses were included and they showed significant benefit in quality of life, early return to work and reduced pain intensity in the group which underwent physical intervention of prehabilitation preoperatively⁸.

Prehabilitation in ERAS protocols:

Prehabilitation is an integral component of ERAS protocols, focusing on preparing patients physically and psychologically for surgery to maximize their functional capacity and resilience. By addressing modifiable risk factors and optimizing patients' health status before surgery, prehabilitation aims to enhance the effectiveness of ERAS interventions and improve surgical outcomes. Numerous studies from colorectal surgery, orthopaedic and cardiac surgeries have demonstrated the effectiveness of prehabilitation within ERAS protocols in improving surgical outcomes and enhancing

patient. All evidences of prehabilitation in gynaecological surgeries are being extrapolated from other specialities. A systematic review and meta-analysis by Falz et al, Li et al found that prehabilitation programs within ERAS protocols were associated with reduced length of hospital stay, decreased postoperative complications, and improved functional recovery in patients undergoing colorectal surgery and also demonstrated that preoperative exercise training within ERAS pathways significantly improved physical fitness, reduced postoperative complications, and enhanced quality of life in patients undergoing major abdominal surgery⁹.

Challenges and Considerations:

Despite its potential benefits, implementing prehabilitation programs in clinical practice may face several challenges, including:

- **Resource constraints:** Limited availability of healthcare resources, including time, personnel, and funding, may pose barriers to the widespread adoption of prehabilitation programs.
- **Patient adherence:** Motivating patients to participate in prehabilitation activities and adhere to the prescribed interventions can be challenging, especially in cases of comorbidities, socioeconomic factors, and logistical barriers.
- **Individualized approach:** Prehabilitation interventions need to be tailored to each patient's unique needs, preferences, and clinical characteristics, which requires a multidisciplinary team and personalized care plans.
- **Integration into existing care pathways:** Incorporating prehabilitation into the preoperative assessment and perioperative care pathways may require changes in clinical workflows, coordination among healthcare providers, and patient education initiatives.

Future Directions: The field of prehabilitation in gynaecological surgeries is evolving rapidly, with ongoing research focusing on novel interventions, optimization of existing protocols,

and implementation strategies. Future directions may include:

- **Integration of technology:** Utilizing digital health tools, wearable devices, mobile applications, and telemedicine platforms to deliver personalized prehabilitation interventions, monitor patient progress, and provide remote support.
- **Patient-reported outcomes:** Incorporating patient-reported outcome measures (PROMs) and patient-reported experience measures (PREMs) to assess the impact of prehabilitation on patients' symptoms, functional status, satisfaction, and healthcare utilization.
- **Health system initiatives:** Implementing prehabilitation programs as part of value-based care models, bundled payment arrangements, and population health management strategies to improve patient outcomes, reduce healthcare costs, and enhance overall healthcare delivery.
- **Clinical trials:** Studies/ trials pertaining to gynaecological surgeries incorporating prehabilitation component will also create evidence and help in betterment for the gynaecological patients.

Conclusion

Prehabilitation has a vital part in optimizing patient post-surgical outcomes and in improving the quality of care in gynaecological surgeries. By addressing physical, psychological, and nutritional factors before surgery, prehabilitation programs can reduce perioperative complications, accelerate recovery, and improve overall patient well-being. However, successful implementation requires a collaborative approach involving patients, healthcare providers, policymakers, and other stakeholders to overcome challenges and promote evidence-based practice in preoperative care. As research continues to

advance, prehabilitation holds promise as a cornerstone of comprehensive perioperative management in gynaecological surgeries, ultimately leading to better outcomes and improved patient satisfaction.

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Quality Care Assurance checklist for Care Around Birth

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The Care Around Birth (CAB) strategy aims at optimizing and improving the quality of care during intra-partum and immediate post-partum periods by developing an implementation approach which brings together technical interventions, health system strengthening efforts, quality improvement methodologies and Respectful Maternity Care (RMC). The strategy is being implemented across 141 high case load facilities accounting for close to 200,000 annual deliveries across 26 High Priority Districts (HPDs) of India.

Respectful maternal care includes respect for women's autonomy, dignity, feelings, privacy, choices, freedom from ill treatment & coercion and consideration for personal preferences including option for companionship during the maternity care.

For improving the quality of care at Public Health Facilities, Quality Assurance Standards for District Hospitals, Community Health Centres, Primary Health Centre and Urban-Primary Health Centres have been drafted, and their implementation has been operationalised through the National Quality Assurance Programme.

Goal

Reduce preventable maternal and newborn mortality, morbidity and stillbirths associated with the care around delivery in labour room and Maternity OT and ensure respectful maternity care.

Objectives

1. To reduce maternal and newborn mortality & morbidity due to APH, PPH, retained placenta, preterm, preeclampsia & eclampsia, obstructed labour, puerperal sepsis, newborn asphyxia, and sepsis, etc.
2. To improve Quality of care during the delivery and immediate post-partum care, stabilization of complications and ensure timely referrals, and enable an effective two-way follow-up system.
3. To enhance satisfaction of beneficiaries visiting the health facilities and provide Respectful Maternity Care (RMC) to all pregnant women attending the public health facility

Strategy

1. Reorganizing/aligning Labour room & Maternity Operation Theatre layout and

Table 1: Do's & Don'ts of Labour Room

Do's	Don'ts
1. Providing privacy to pregnant women during the intrapartum period, by way of separate labour room or at least a private cubicle	Not adhering to RMC
2. Presence of birth companion during the labour	Any verbal or physical abuse of the pregnant
3. Freedom to choose a comfortable position during birthing (squatting, standing, etc)	Insisting on conventional lithotomy position for the delivery
4. Adherence to Clinical protocols for management of labour	Induction and augmentation of labour without sound clinical indications
5. Use of labour beds instead of tables	Immediate clamping and cutting of the umbilical cord
6. Place baby on mother's abdomen	Separating baby from the mother for routine care & procedure
7. Initiation of Breast feeding within one hour of birth	Out of Pocket Expenditures (OOPE) on drugs, diagnostics, including demand by the staff for gratuitous payment by families for celebration of the baby's birth

workflow as per 'Labour Room Standardization Guidelines' and 'Maternal & Newborn Health Toolkit' issued by the Ministry of Health & Family Welfare, Government of India.

2. Ensuring that at least all government medical college hospitals and high strategies case-load district hospitals have dedicated obstetric HDUs as per GOI MOHFW Guidelines, for managing complicated pregnancies that require life-saving critical care.
3. Ensuring strict adherence to clinical protocols for management and stabilization of the complications before referral to higher centers.

Scope

Following facilities would be taken under LaQshya initiative on priority: All government medical college hospitals, District Hospitals & equivalent health facilities, all designated FRUs and high case load CHCs with over 100 deliveries/60 (per month) in hills and desert areas.

Targets

Immediate (0-4 Months)

1. 80% of the selected Labour rooms & Maternity OTs assess their quality and staff competence using defined NQAS checklists and OSCE.
2. 80% of Labour rooms & Maternity OTs have setup functional quality circles and facility level quality teams. Short Term (up to 8 Months) targets are: 80% of Labour Room and OT Quality Circles are oriented to latest labour room protocols, quality improvement processes and respectful maternity care (RMC). 50% of deliveries take place in presence of the Birth Companions.
3. 60% of deliveries conducted using safe birth checklist and Safe Surgery Checklist in Labour Room & Maternity OT respectively.
4. 60% of the deliveries are conducted using real-time partograph.
5. 30% increase in Breast Feeding within one

hour of delivery.

6. 80% labour rooms and Maternity OTs take microbiological samples from defined areas every month.
7. 30% reduction in surgical site infection rate in the Maternity OT.

Intermediate Term (Up to 12 Months)

1. 30% increase in antenatal corticosteroid administration in case of preterm labour.
2. 30% reduction in pre-eclampsia, eclampsia & PIH related mortality.
3. 30% reduction in APH/PPH related mortality.
4. 20% reduction in new-born asphyxia related admissions in SNCUs for inborn deliveries.
5. 20% reduction in newborn sepsis rate in SNCUs for inborn deliveries.
6. 20% reduction in Stillbirth rate.
7. 80% of all beneficiaries are either satisfied or highly satisfied. 10 LaQshya - Labour Room Quality Improvement Initiative | 2017
8. 60% of the labour rooms are reorganized as per 'Guidelines for Standardisation of Labour Rooms at Delivery Points'.
9. 80% of labour rooms have staffing as per defined norms.
10. 100% compliance to administration of Oxytocin, immediately after birth.
11. 30% improvement in OSCE scores of labour room staff.
12. 100% Maternal death, Neonatal Death audit and clinical discussion on near miss/maternal and neonatal complications.
13. 80% Labour Room and OTs are reporting zero stock-outs of drugs and consumables.

Long Term (up to 18 Months)

1. 60% of labour rooms achieve quality certification against the NQAS.
2. 50% of labour rooms are linked to Obstetrics HDU/ICU.
3. 15% improvement in short term & Intermediate targets. After 18 months, this initiative would be continued through

sustained mentoring

Interventions

Key approach under this initiative is breakthrough improvement using business process re-engineering concepts. This would require substantial reorganization of labour room structure (Infrastructure, HR, and Drugs & Equipment) and processes.

Structural improvement will include the following:

Interventional and Baseline Assessment using Guidelines for LR Standardization, MNH Toolkit & NQAS Improvement Dimensions. It would be ensured that quality circles at the departments and support groups (Quality team & coaching team) work in harmony for solving the problems and take all possible actions for the closure of gaps.

Interventions

1. Ensuring availability of optimal and skilled human resources as per case-load and prevalent norms through rational deployment and skill upgradation. Suggested HR for the labour room.
2. Ensuring skill assessment of all staff of LR & Maternal OT through OSCE (Objective Structured Clinical Examination) testing as per Dakshata guidelines for delivery of 'zero-defect' quality obstetric and newborn care. Enhance proficiency of labor room and operation theatre staff for management of the complications through skill-lab training, simulations and drills. Ensuring that staff working in the labor room and maternity OT are not shifted from maternity duty to other departments/wards frequently.
3. Sensitizing care-providers for delivery of respectful maternity care and close monitoring of language, behavior and conduct of the labor room, OT & HDU Staff.
4. Creating an enabling environment for natural birthing process.
5. Implementation of Clinical Guidelines, Labor Room Clinical Pathways, Referral Protocols, safe birth checklist (in labor room and Obstetric OT) and surgical safety check-list.
6. Ensuring round the clock availability of Blood transfusion services, diagnostic services, drugs & consumables.
7. Ensuring availability of triage area and functional newborn care area.
8. Ensuring systematic facility-level audit of all cases of maternal/neonatal deaths, stillbirth, and maternal near LaQshya - Labor Room Quality Improvement Initiative 2017 including with their mentor teams through clinical discussions, peer reviews in teaching institutes, Video conference, or other distance mode mechanisms for continuous improvement and learning.
9. Operationalization of 'C' Section audit and corrective & preventive actions for ensuring that 'C' Sections are undertaken judiciously in those cases having robust clinical indications.
10. Instituting an ongoing system of capturing of beneficiaries' independent feedback through mechanism 'Mera Aspataal' or manual recording, or Grievance Redressal Help Desk and take action to address concerns, for continual enhancement in their satisfaction.
11. Ensuring availability of essential support services such as 24x7 running water, electricity, housekeeping, linen and laundry, security, equipment maintenance, laboratory services, dietary services, BMW management, etc.
12. Use of digital technology for record keeping & monitoring for maternity wing (MIS), including use of E partograph. Piloting of technology for managing care, such as Computer on Wheel, Computerized Physician Order Entry.
13. Use aggressive IEC, user friendly training material and IT-enabled tools. Facilitating branding of all high case load facilities meeting quality standards to improve visibility and awareness.
14. Using Quality tools for prioritization, and gap closure such as Plan Do Check Act (PDCA),

Root Cause Analysis, Run Charts, Pareto chart and Mistake Proofing for achieving desired targets.

15. Rapid Improvement Events - Six cycles of two months each as defined below will need to be rigorously supervised and ensured. This will enable competency in all critical skills needed. For each area, a targeted campaign would be launched for a two months duration, with the first month for the roll-out, followed by sustaining such efforts during the subsequent month (Period for one event – 2 months).

Suggested list of the themes for campaigns is given below:

- a) **Cycle 1:** Real-time Partograph generation including shift to electronic partograph & usage of safe birth check-list & surgical safety check-list and strengthening documentation practices for generating robust data for driving improvement.
- b) **Cycle 2:** Presence of Birth companion during delivery, respectful maternity care and enhancement of patients' satisfaction.
- c) **Cycle 3:** Assessment, Triage and timely management of complications including strengthening of referral protocols.
- d) **Cycle 4:** Management of Labor as per protocols including AMTSL & rational use of Oxytocin.
- e) **Cycle 5:** Essential and emergency care of Newborn & Pre-term babies including management of birth asphyxia and timely initiation of breast feeding as well as KMC for preterm newborn.
- f) **Cycle 6:** Infection Prevention including Biomedical Waste Management

Activities under LaQshya are divided into four phases

- a. **Preparatory Phase - 2 Months** This will include i. Launch and dissemination of the scheme. ii. Identification of members for National mentoring group and operationalization of the group.

Phasing of Activities Assessment Phase •

Dissemination • Team Formation • Orientation • Quality Circles • Baseline Assessment • Gap Analysis • Action Planning • Resource Allocation • Rapid Improvement Cycles • Sustaining Improvement • Coaching Team visits • Evaluation of Achievements • Quality Certification • Awards

Improvement Phase Evaluation Phase

Summary of Activities: National level orientation workshop of national resource team and state nodal officers. iv. Issue of the instructions to the State and district stakeholders. v. Formation of state mentoring group. vi. Identification and listing of facilities to be included in the initiative. vii. State level ToT of the Quality Coaches. viii. Formation of Quality circles at the labor rooms and Operation Theatres.

- b. **Assessment Phase - 2 Months** i. Orientation of Quality Circles on Quality Improvement and Clinical Protocols. ii. Assessment of the Labor Rooms & Maternity OT against National Quality Standards. iii. Planning for expansion of Labor rooms as per 'Guidelines for Standardization of Labor Rooms at Delivery Points' and upgradation the Maternity OT. iv. Preparation of time bound action plan, based on the identified gaps. v. Planning for creation of Obstetrics HDU as per recommendations of 'Guidelines for Obstetrics HDU & ICU'. vi. Collation of requirements and resource allocation through the PIP process under the NHM. vii. Mapping of referral facilities (type of facility, distance & travel time, contact details, availability of services including facility for the blood transfusion, availability of other specialties such as Physician, Surgeon, Pathology & Biochemistry lab & Ultrasound facility, nearest tertiary care institution
- c. **Improvement Phase - 12 Months** i. Launch of rapid improvement cycles. Each cycle includes one month of improvement and subsequent month of consolidation and sustenance. ii. Ensuring adherence to clinical protocols & peer-mentoring. iii. Establish Standard Operating Procedures

for labour rooms & maternity OT. xii. Analysis of Patients' feedback and taking actions for addressing the beneficiaries' concerns.

- d. Evaluation Phase - 2 Months**
- i. Evaluation of the quality objectives and indicators.
 - ii. External Assessment & Quality certification of labour rooms & Maternity OT.
 - iii. Awards to best performing quality circles and Coaching Teams.
 - iv. National level dissemination of achievements.
 - v. Development of Strategy for Labour Room Quality Objectives Improvement Theme Act

Plan Check Do Act PDCA Cycle & Enabling Activities

Quality Certification: The Labour Room & Maternity OT Checklists developed for NQAS, will be used as tools for the assessment and certification. The external assessment and certification will be done by external assessors empanelled with NHSRC. Certification will be valid for 3 years subject to annual verification of the scores by the State Quality Assurance Committee.

b. Incentivization: The teams in the Labour rooms and Maternity OT's at Medical Colleges, District Hospitals and SDH/CHCs could

Checklist for Labor Room

Area of Concern	Procedure and Provisions
Service Provision	<ul style="list-style-type: none"> • Curative Services • RMNCHA Services • Diagnostic Services
Patient Rights Standard Services are delivered in a manner that is sensitive to gender, religious and cultural needs, and there are no barrier on account of physical economic, cultural or social reasons	<ul style="list-style-type: none"> • Provides information to care seekers, attendants & community about the available services and their modalities • Maintains privacy, confidentiality & dignity of patient, and has a system for guarding patient related information • Defined and established procedures for informing patients about the medical condition, and involving them in treatment planning, and facilitates informed decision making • Ensures that there are no financial barrier to access, and that there is financial protection given from the cost of hospital services
Inputs Standard The facility has infrastructure for delivery of assured services, and available infrastructure meets the prevalent norms	<ul style="list-style-type: none"> • Ensures the physical safety of the infrastructure • Established Program for fire safety and other disaster • Adequate qualified and trained staff, required for providing the assured services to the current case load • Provides drugs and consumables required for assured services • Equipment & instruments required for assured list of services • Defined and established procedure for effective utilization, evaluation and augmentation of competence and performance of staff
Support Services Standard The facility has established Program for inspection, testing and maintenance and calibration of Equipment	<ul style="list-style-type: none"> • Defined procedures for storage, inventory management and dispensing of drugs in pharmacy and patient care areas • Provides safe, secure and comfortable environment to staff, patients and visitors • Established Program for maintenance and upkeep of the facility • Ensures 24X7 water and power backup as per requirement of service delivery, and support services norms
Administrative and Clinical standards The facility has defined procedures for registration, consultation and admission of patients Roles & Responsibilities of administrative and clinical staff are determined as per govt. regulations and standards operating procedures.	<p>The facility has defined and established procedures for clinical assessment and reassessment of the patients</p> <p>Defined and established procedures</p> <ul style="list-style-type: none"> • For continuity of care of patient and referral • Defined and established procedures for nursing care • To identify high risk and vulnerable patients • Follows standard treatment guidelines defined by state/Central government for prescribing the generic drugs & their rational use • For safe drug administration • Maintaining, updating of patients' clinical records and their storage • Blood Bank/Storage Management and Transfusion. • Intranatal care and Post natal care as per guidelines • Infection control Program and procedures in place for prevention and measurement of hospital associated infection • Ensuring hand hygiene practices and antiseptics • Processing of equipment and instruments • Segregation, collection, treatment and disposal of Bio Medical and hazardous Waste
Quality Management Standard The facility measures Service Quality Indicators and endeavors to reach State/National benchmark And ensure to reach State/National Benchmark	<ul style="list-style-type: none"> • Established organizational framework for quality improvement • Established system for patient and employee satisfaction • Established internal and external quality assurance Programs wherever it is critical to qua • Established, documented implemented and maintained Standard Operating Procedures for all key processes and support services • Maps its key processes and seeks to make them more efficient by reducing non value adding activities and wastages • Established system of periodic review as internal assessment, medical & death audit and prescription audit • Defined mission, values, Quality policy & objectives & prepared a strategic plan to achieve them • Established procedures for assessing, reporting, evaluating and managing risk as per Risk Management Plan • Measures Productivity Indicators • Measures Efficiency Indicators • Measures Clinical Care & Safety Indicators

be given incentives of Rs. 6 Lakhs, 3 Lakhs and 2 Lakhs (for each department) Quality Certification of Labour Room and/or OT as per protocol under the NQAS. LaQshya facilities should endeavour to introduce 'Mera-Aspataal' ICT based feedback system. As an interim measure, feedback from the beneficiaries may be taken manually. This incentive is recognition of the good work done by the quality circles and facility's quality team. This amount can be used as cash incentive to the staff and also for the welfare activities.

Branding: The achievement of quality benchmarks should be used for branding of the QoC at the health facility. This will give sense of pride to the staff as well as provide confidence to the community that they are getting quality care at public hospitals.

Certification, Incentives & Branding LaQshya

The departments may be provided Badges (LaQshya Medal) based on the quality score, achieved in the state level assessment. Platinum Badge: Achieving more than 90% core. Gold Badge: Achieving More than 80% Score. Silver Badge: Achieving more than 70% Score. These badges should be worn by the care providers as well as prominently displayed at relevant places in the hospitals.

Monitoring and Reporting Maternal Health Nodal officer & Nodal Officer for Quality Assurance will be responsible for this

implementing the activities. The data for these indicators can be directly pulled from the respective systems. All indicators need to be reported by facility on monthly basis after verification from respective coaching teams.

The Government of India through its National programs targets to achieve a transformational change in the processes related to the care during the delivery, which relates to intrapartum and postpartum care, and to achieve these results within short period of time. Prerequisite of such approach would also hinge upon the health system's preparedness for prompt identification and management of maternal and newborn complications. Delivery of such transformed care would not only need availability of adequate infrastructure, functional & calibrated equipment, drugs & supplies & HR, but also meticulous adherence to clinical protocols by the service providers at the health facilities. Respectful maternity care should include courteous and empathetical treatment to pregnant women in labour ensuring positive outcomes for the mothers and newborns which supports cognitive development of the babies later in the life.

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Telemedicine in Obstetrics and Gynaecology: A Transformative Frontier

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Telemedicine, the intersection of medicine and technology, has rapidly emerged as a transformative force in the field of healthcare. Particularly in Obstetrics and Gynaecology (OB/GYN), this innovative approach holds immense promise, offering solutions to longstanding challenges and expanding access to care for patients worldwide. With the advent of telemedicine, OB/GYN practitioners can now provide a wide array of services remotely, revolutionizing prenatal care, postpartum support, gynaecological consultations, and more. In this article, we delve into the burgeoning realm of telemedicine in OB/GYN, exploring its benefits, challenges, and the future it holds for patients and practitioners alike.

Benefits of Telemedicine in OB/GYN:

1. **Enhanced Access to Care:** One of the most significant advantages of telemedicine in OB/GYN is its ability to reach patients in remote or underserved areas. Women residing in rural regions, far from specialized OB/GYN facilities, can now access expert care through virtual consultations. This improved access is pivotal in ensuring timely interventions and reducing disparities in maternal and reproductive health.
2. **Convenience for Patients:** Telemedicine offers unparalleled convenience, allowing patients to consult with their OB/GYN from the comfort of their homes. This is particularly beneficial for pregnant women, eliminating the need for frequent travel to clinics, especially during the sensitive periods of pregnancy.
3. **Early Detection and Monitoring:** Through telemedicine platforms, OB/GYNs can remotely monitor pregnancies, track fetal development, and promptly identify any concerning signs or symptoms. This early

detection can lead to timely interventions, improving maternal and fetal outcomes.

4. **Continuity of Care:** Telemedicine fosters seamless continuity of care by enabling OB/GYNs to maintain regular contact with their patients. Follow-up appointments, postpartum check-ins, and contraceptive consultations can all be conducted virtually, ensuring comprehensive care throughout the reproductive journey.
5. **Educational Opportunities:** Telemedicine opens doors to educational initiatives, allowing OB/GYNs to conduct virtual seminars, workshops, and patient education sessions. This not only empowers patients with knowledge but also enhances the skills of healthcare providers in remote areas through virtual training programs.

Challenges and Considerations:

1. **Technological Barriers:** While telemedicine offers immense potential, technological barriers such as limited internet access and lack of digital literacy can hinder its widespread adoption, especially in low-resource settings. Efforts to bridge this digital divide are crucial to ensure equitable access to telemedicine services.
2. **Privacy and Security Concerns:** Protecting patient privacy and ensuring the security of sensitive medical data are paramount in telemedicine. Robust encryption methods and adherence to strict privacy protocols are essential to maintain patient trust and compliance with healthcare regulations.
3. **Diagnostic Limitations:** While telemedicine facilitates virtual consultations, certain aspects of OB/GYN care, such as physical examinations and diagnostic tests, still require in-person visits. Striking a balance between remote care and the need for

hands-on assessments remains a challenge.

4. **Medico-Legal Considerations:** The practice of telemedicine in OB/GYN raises complex medico-legal issues, including licensure across state or national borders, liability in case of adverse events, and reimbursement policies. Clear guidelines and regulatory frameworks must evolve to address these intricacies.
5. **Patient-Provider Relationship:** Establishing a strong patient-provider relationship, characterized by trust and empathy, is fundamental in OB/GYN care. Telemedicine, while convenient, may pose challenges in building this rapport due to the absence of face-to-face interactions.

The Future of Telemedicine in OB/GYN:

As telemedicine continues to evolve, its integration into OB/GYN practice holds immense promise for the future. Advancements in wearable technology, such as remote fetal monitoring devices and home-based diagnostic kits, will further enhance the scope of virtual care. Artificial intelligence (AI) algorithms can aid in the analysis of patient data, offering personalized insights and predictive analytics for better outcomes.

Moreover, telemedicine paves the way for multidisciplinary collaboration, allowing OB/GYNs to consult with specialists in real-time, regardless of geographical boundaries. This collaborative approach ensures comprehensive care for complex cases, improving patient outcomes and satisfaction.

In conclusion, telemedicine stands as a beacon of innovation in the realm of Obstetrics and Gynaecology. While challenges persist, the

benefits it offers in terms of accessibility, convenience, and enhanced care are undeniable. As we navigate this transformative frontier, it is imperative to strike a balance between technological advancements and the human touch that defines compassionate healthcare. Telemedicine in OB/GYN is not merely a tool for remote consultations; it is a catalyst for positive change, empowering women to take control of their health and well-being.

Opinion: Telemedicine in Obstetrics and Gynaecology represents a remarkable evolution in healthcare delivery, bridging gaps in access and revolutionizing patient care. Its potential to improve maternal and fetal outcomes while enhancing patient convenience cannot be overstated. However, addressing technological disparities and ensuring robust privacy measures are imperative for its widespread success. The future of OB/GYN care lies in a harmonious blend of virtual innovation and compassionate, patient-centered practice.

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Good blood transfusion practices in Obstetrics & Gynaecology

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Introduction

Blood transfusion is one of the life saving interventions in obstetrics and gynaecology practice. According to a recent study, the estimated annual population need of India was 26.2 million units (95% CI; 17.9-38.0) of whole blood to address the need for red cells and other components after the separation process, out of which Obstetrics and Gynaecology contributes 3.6 million units (95% CI:1.9-6.2), this is 13.74%¹. It is recognized as one of the eight essential components of comprehensive emergency obstetric care, which has been shown to reduce maternal mortality. It is a life-saving procedure but with its associated risks. The important issues with blood transfusions are the adverse events associated, the rising costs of collecting and processing, and the possible future problems of availability. Strict adherence to correct sampling, cross-matching, and administration procedures is therefore of paramount importance, even in an emergency. Understanding when to use blood transfusions and their potential problems is crucial in obstetrics and gynaecology. This chapter aims to explain why transfusions are needed, what blood products are used, and how

Table 1: Population need for transfusion according to indication in obstetrics and gynaecology²

Condition	Percentage
Obstetric haemorrhage	23.6%
Anaemia	15.2%
Hysterectomy for gynaecological cause	16.6%
Hepatic disorders	13.6%
Abnormal uterine bleeding	10.2%
Myomectomy	5.6%
Ectopic pregnancy	4.8%
Abortion	1.5%

to ensure they're given safely, while also discussing possible complications.

Different blood products and indications of transfusion in obstetrics and gynaecology

The three major indications are obstetric hemorrhage, anemia of pregnancy and hemoglobinopathies and surgeries where significant blood loss is expected. Table 1 lists the population need for transfusion according to the specific conditions in obstetrics and gynaecology

The main goal of blood transfusion is to enhance the oxygen carrying capacity of blood and maintain haemostasis without exposing the women to unnecessary risks.

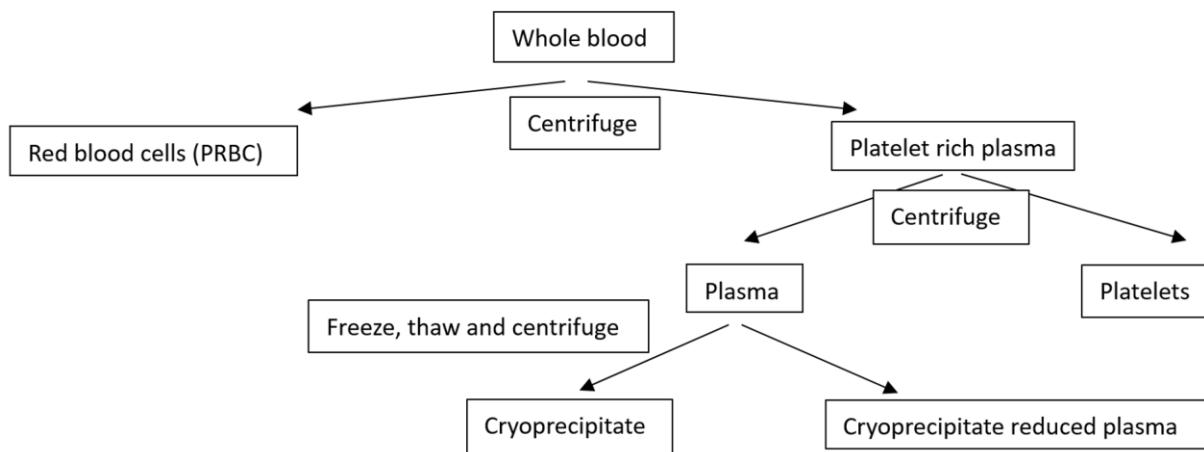


Figure 1: Common blood products

Safe blood transfusion practices

Ensuring the safety and efficacy of blood transfusions hinges on meticulous adherence to every stage of the process. This includes:

- Thorough pre-transfusion assessment
- Careful selection of blood products
- Evaluation of urgency, and consideration of the patient's clinical condition.
- Vigilant monitoring during and after transfusion
- Appropriate disposal of all materials used.

Any lapses in these procedures can precipitate complications, resulting in heightened morbidity and, in severe cases, mortality.

Pre transfusion checklist

- As obstetric patients may require massive transfusions any time during pregnancy, all tertiary hospitals with an obstetric unit should have a massive transfusion protocol and all the doctors, nurses and staff working in the labour rooms and wards should be aware of the procedure of blood procurement and transfusion. The protocol for management of major obstetric haemorrhage should be updated annually and practiced in skills and drills.
- The blood banks should have a functional emergency release protocol (a minimum of 4 units of O negative/ un-crossmatched RBCs and the ability to obtain 6 units PRBCs and 4 units FFP for a bleeding patient³).
- All antenatal woman should have their blood group and antibody status checked at booking.
- In case of high risk patients like placenta previa and accreta spectrum, grouping and screening of samples should be sent weekly to exclude or identify any new antibody formation and to keep blood available if necessary⁴.
- It a good practice to determine WHAT, Whether required, How much required, Actual component required, Time and duration of transfusion before planning any transfusion

- For blood grouping 2-3 ml sample is collected in EDTA tube and 3-5 ml in EDTA tube for cross match. Collection of samples should always be done after wearing gloves, in all asepsis with disposal of waste in appropriate biomedical waste avoiding any needle stick injuries.
- For routine cases, it is recommended to have blood grouping and cross matching but for immediate cases only blood grouping is done or O negative is released as uncrossed match group O negative blood takes only 5 minutes to release while uncross match specific takes 15 minutes. A full cross matching with blood grouping takes 2-3 hours to release.

Transfusion checklist

Right blood, right patient, right amount, right time and right place

- **Consent** – a valid consent should always be taken where possible explaining the need for blood transfusion and risks and complications. In emergency, a retrospective consent should be documented and in case of refusal, option of autologous transfusion should be given and documented⁴
- There is no need for warming of blood before elective transfusion but is required in large volume rapid transfusions and while transfusing in Ots⁵
- Always check the blood bag label and look for any leakage, hemolysis or clotting of blood. Check the patient's name, hospital ID, blood group, blood component and expiry date on the label.
- A special blood transfusion BT set is used which can have both central or peripheral access. Normal saline 0.9% (20 ml) is flushed before and after transfusion (do not use dextrose as it causes lysis of cells) and it has a 170-200 micron filter. It is advised to be changed after every 4 units or 12 hourly and platelet concentrates should not be transfused with BT set already used for other component⁶.
- Emergency drugs in case of any reaction should be readily available before starting

transfusion.

- Blood transfusion should not start unless medical person is available on site and should be avoided at late hours unless urgent.
- According to NICE, pre-transfusion vital monitoring should be done within 60 minutes of start of transfusion⁷.
- Monitor vitals every 15 minutes after start of each unit and observe for any new symptom or reaction⁷.
- In case of any suspected transfusion- immediately stop the transfusion, check vitals, and provide immediate care
- Post transfusion vital monitoring should be done within 60 minutes of end of process⁷.
- All waste to be discarded according to BMW protocols after completing the transfusion
- Proper communication and documentation is of paramount importance at every step.
- Any reaction should be informed to the blood bank staff with complete transfusion reaction report form, blood bag with BT set, post transfusion samples⁵.
- In case of suspected bacterial contamination, blood cultures should be sent from both the patient as well as blood bag immediately⁵.

Packed Red blood cells

It is prepared from whole blood by removal of plasma. One unit contains 250-350 ml (180-250 ml red cells with 60-100 ml normal saline, adenosine, glucose and mannitol -SAGM) with hematocrit of 50-70% and less than 20 ml plasma and increase hemoglobin by 1-1.5 g/dl. It has a better preservation, longer shelf life than whole blood and lower viscosity thus easier to transfuse than whole blood.

Safe practices for PRBC transfusion

- Always ABO identical/ compatible PRBC must be given⁴.
- Infusion should be started within 30 minutes of release from refrigerator and completed within 4 hours. For rapid transfusion 16-18 G IV access and for routine transfusion 20-22 Gauge IV access should be there.

Intra-uterine transfusions

An important indication for obstetric blood transfusion is intrauterine transfusion to the

Table 3: safe blood groups to transfuse PRBC

Patient ABO type	Compatible PRBC component
O	O
A	A and O
B	B and O
AB	A, B, AB and O

Table 2: Indications for RBC transfusion in obstetrics and gynaecology⁸

Antepartum	<ul style="list-style-type: none"> • Pregnancy <34 weeks - Hb < 5g/dl - Hb 5-7 g/dl with impending heart failure • Pregnancy >34 weeks - Hb < 7 g/dl - Anemia with decompensation • Hemoglobinopathy or bone marrow failure syndromes • Acute hemorrhage – always if Hb <6 g/dl or hemodynamic instability due to ongoing hemorrhage
Intrapartum	<ul style="list-style-type: none"> • Hb < 7g/dl • Depends on medical history and symptoms
Postpartum	<ul style="list-style-type: none"> • Anemia with signs of shock • Acute hemorrhage with hemodynamic instability • Hb >7g/dl if symptomatic
Gynaecology	<ul style="list-style-type: none"> • Transfuse essential if Hb <5g/dl • Symptomatic patients • Perioperative considerations • Indicated if Hb>7g/dl after assessing symptoms • Do not transfuse if Hb>10g/dl
<ul style="list-style-type: none"> • Massive transfusion protocol 	

Table 4: differences between RDP and SDP (5)

Feature	RDP	SDP
Cost	Cheaper	Expensive
Collection	Easy	Expertise needed
Time	Less	More
Volume	40-90ml/bag	200-240ml/bag
Increase platelet count by	5000-10,000 / μ L	30,000-50,000/ μ L

foetus in cases of foetal anaemia. The transfusion should be performed by fetal medicine specialist in the operation theatre with strict asepsis. The following specifications must be ensured⁶.

- O negative blood group
- Leucocyte depleted
- Irradiated (to prevent transfusion associated GVHD)
- To be used within 24 hours of irradiation
- Plasma reduced (Hematocrit 75-80%)
- Negative for CMV antibodies

Platelets

Two types of products are available – RDP (random donor platelets) and SDP (single donor platelets)

Indications

- Counts less than 10,000 / μ L without risk factors
- Counts >10,000 / μ L with risk factors (fever, platelet disorders)
- Maintaining count of 50,000 / μ L in preoperative patients
- During bleeding when thrombocytopenia is considered major risk factor
- Massive transfusion protocols

Safe practices for platelets transfusion

- Platelets express ABO antigens and hence, it is safer to use with ABO compatibility but can also be given across different ABO groups.
- Platelets do not express Rh antigens hence they can be given regardless of the Rh antigen. However, they contain a small amount of RBCs and Rh negative mothers should receive Rh negative blood to prevent alloimmunisation. If in emergency, Rh positive blood is transfused to child bearing age group females, 300 IU IM stat should be

given by subcutaneous route (avoid intramuscular route in severe thrombocytopenia).

- Platelets must not be refrigerated before transfusion as it reduces platelet function⁵.
- Transfusion should start immediately after release to prevent bacterial contamination and completed within 4 hours and 20-22 gauge IV access should be used⁵.

Plasma

One unit of plasma (180-300ml) is obtained from centrifugation of one unit of whole blood. It contains nearly normal levels of all factors except factor VIII, fibrinogen. It is stored at -180.C and is not commonly used

Fresh frozen plasma (FFP)

It is obtained by separating plasma from whole blood within 6 hours of collection and rapidly freezing to -25! and contains all plasma proteins and clotting factors

Indications

- Multiple clotting factors deficiency (DIC, Liver disease, TTP)
- INR >1.6 with active bleeding
- PT/aPTT >1.5 times
- Immediate reversal of warfarin

Cryoprecipitate

Cold insoluble plasma protein, precipitated in FFP when it is thawed at 1.6! followed by centrifugation, collection and refreezing. It contains fibrinogen, factor VII, vWF, factor XIII and fibronectin.

Indications

- Fibrinogen deficiency (<80-100 mg/dl)
- Hemophilia A
- Von Willebrand disease
- Factor XIII deficiency
- DIC

Safe practices for FFP and cryoprecipitate transfusion

- Must be ABO compatible to avoid risk of hemolysis on recipients⁴.

- Before use, thaw in water at 30-37!⁵.
- Once thawed, store at 2-6!
- Use within 6 hours of thawing as labile factors degrade
- To be used as soon as possible after thawing and completed within 30 minutes with a 20-22 gauge IV access
- FFP of a different ABO group is acceptable if there are no high titres of anti-A or anti-B
- No anti D prophylaxis is required if RhD negative woman receives Rh positive FFP or cryoprecipitate⁴.

Complications⁵

- Infections (viral, bacterial, parasite, prion)
- Hemolytic reaction
- Febrile, non hemolytic reaction
- Urticaria
- Anaphylaxis
- TRALI (transfusion associated lung injury)
- Alloimmunisation
- GVHD
- Post transfusion purpura
- Transfusion associated sepsis
- Hypotension
- TACO (transfusion associated circulator overload)
- Air embolism
- Non immune hemolysis
- Hypocalcemia
- Hypothermia
- Iron overload

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ALGORITHM

Role of ERAS in Gynae-Oncology

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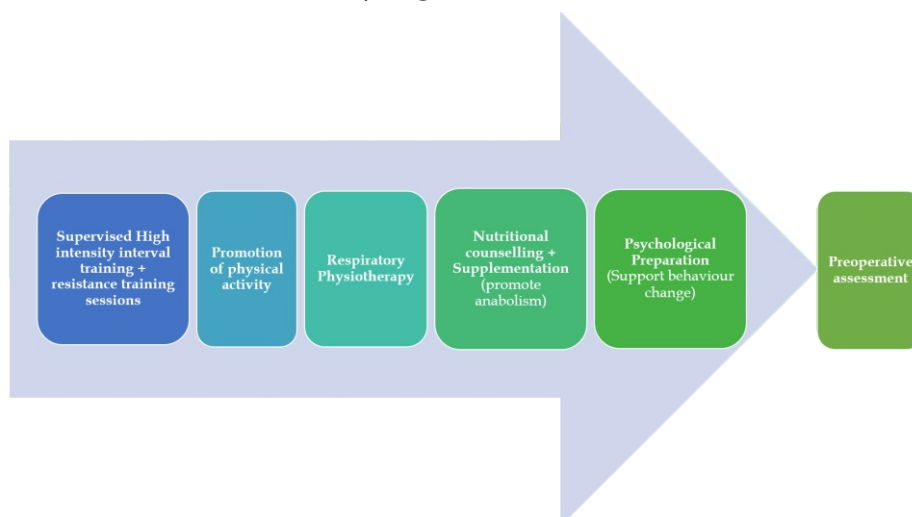
The term “fast track recovery” was coined in 1994 to describe a set of interventions aimed at expediting recovery and discharge following cardiopulmonary bypass surgery. This concept gained further traction when Kehlet popularized it in 1999, implementing a multimodal prehabilitation approach involving minimally invasive surgery, preoperative patient education, early enteral feeding, and mobilization, resulting in hospital admissions as short as 2 days after colorectal surgery. Today, Enhanced Recovery After Surgery (ERAS) stands as a globally recognized method for improving surgical outcomes, encompassing physical and nutritional interventions from diagnosis (prehabilitation) through the perioperative period. However, it’s worth noting that these recommendations primarily stem from studies conducted on elective abdominal surgery or colorectal procedures.

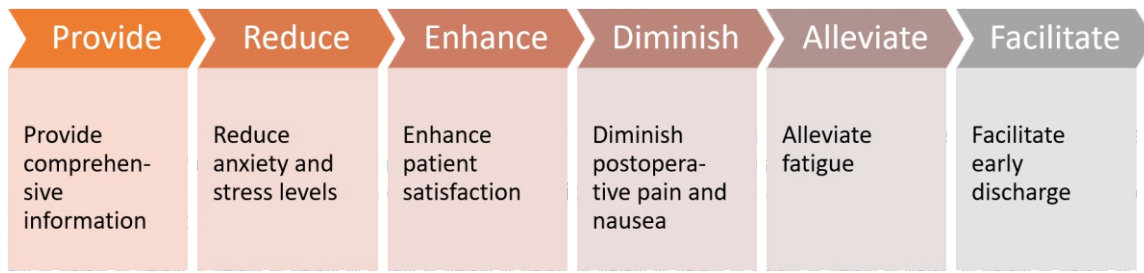
Prehabilitation

Prehabilitation programs aim to enhance recovery by bolstering a patient’s functional and metabolic reserves before intervention. This continuum of care spans from cancer diagnosis to the onset of acute treatment, establishing a baseline functional level, identifying

impairments, and offering targeted interventions to improve health and reduce the severity of current and future impairments. These programs are multimodal, incorporating exercise, nutritional counselling (e.g., protein supplementation), psychological support (e.g., stress reduction techniques), promoting cessation of detrimental behaviours, optimizing comorbidities like hypertension and diabetes, and addressing modifiable risk factors such as frailty and anaemia associated with post-operative complications. A simplified outline of a prehabilitation program for gynaecological oncology surgery is provided below:

Engaging in 150 minutes per week of purposeful moderate aerobic exercise or 75 minutes per week of vigorous exercise, along with resistance training and inspiratory muscle training (sessions lasting 15-30 minutes conducted 5-7 days per week), is advised by the American College of Sports Medicine. These interventions have shown to reduce post-operative complications following intra-abdominal operations and facilitate an earlier return to functional walking capacity in the postoperative period¹.





Pre-admission Information, Education and Counselling:

Between 60-90% of oncological patients commonly experience heightened levels of anxiety before undergoing surgical treatment, which may lead to missed appointments, inadequate physical preparation, and a stress response that can hinder recovery.

It is recommended that patients, accompanied by a trusted confidant or relative, meet with all healthcare providers involved, including the surgeon, anaesthesiologist, dietitian, and nurse, to receive both oral and written education.^{2,3}

Preoperative Fasting and Carbohydrate treatment:

Preoperative oral carbohydrate intake, typically around 50 grams with low fat and low osmolality, taken two to three hours before anaesthesia induction, has been shown to alleviate preoperative anxiety, hunger, and thirst, reduces post-operative insulin resistance³, decreases protein breakdown, enhances the return of bowel function, helps in maintaining lean body mass and muscle strength while providing beneficial cardiac effects and shortens hospital stay⁴.

Pre-operative bowel preparation:

Preoperative bowel preparation was introduced as a measure to reduce surgical site infections stemming from the high bacterial presence in the colon. This procedure typically involves mechanical bowel preparation, which entails the use of purgatives to diminish intraluminal bacterial concentration, along with oral nonabsorbable antibiotics to further decrease intestinal bacterial content. A clean colon is believed easy to manipulate and facilitate the passage and firing of surgical staplers. However, the utilization of MBP has also been associated with patient dissatisfaction, preoperative dehydration, electrolyte imbalances, and an elevated risk of intra-abdominal infection due to potential spillage of liquid contents following enterotomy.

However, research into minimal invasive surgeries, open laparotomies, and elective colorectal surgery has failed to demonstrate any advantages in enhancing intraoperative visualization, facilitating bowel handling, improving procedure performance, reducing surgical site infections, or preventing anastomotic leaks with mechanical bowel



preparation. Despite this evidence, mechanical bowel preparation remains a prevalent practice in surgeries involving anticipated bowel resections.

Venous Thromboembolism prophylaxis:

Patients undergoing gynecologic cancer surgery face inherent risks of venous thromboembolism due to the neoplastic origin, exposure to chemotherapy, and extensive pelvic surgery. Incidence rates can range up to 3–4% in cervical cancer, 4–9% in endometrial cancer, and 17–38% in ovarian cancer. These patients typically fall into high-risk categories when evaluated with tools such as the Caprini Risk Score, necessitating perioperative anticoagulation and mechanical prophylaxis with compression stockings.

Initiating low molecular weight heparin within 24 hours post-surgery and continuing for 28 days has been shown to reduce the risk of VTE during this period by 78%, a practice currently recommended by ESGO for ovarian cancer patients undergoing cytoreduction⁵. Direct oral anticoagulants such as Apixaban 2.5mg twice daily and Rivaroxaban 10mg once daily serve as efficient alternatives to Enoxaparin 40mg once

daily, offering extended prophylaxis with enhanced patient satisfaction and no increased risk of bleeding events⁶.

Surgical Site infection reduction bundles:

Surgical site infections are defined as infections of the surgical incision or organ space that develop within 30 days of surgery. Surgical site infection reduction bundles have been demonstrated to decrease the risk of developing a surgical site infection in an additive fashion.

Standard Anaesthetic Protocol:

- Choice of Anesthetic Agents
- Sevoflurane or Desflurane preferred for faster recovery
- Propofol for faster induction and antiemetic properties
- Intravenous drugs like Dexmedetomidine, Ketamine, and Lidocaine for pain relief
- Monitoring and Management
- Peripheral nerve stimulators for neuromuscular block monitoring
- Bispectral index for anesthesia depth guidance, especially in elderly
- Tidal volume 6–8 ml/kg with positive end-

Antibiotic Prophylaxis

- Administered within two hours of incision time
- Selection based on surgery type and wound classification
- Cephalosporins commonly used for abdominal gynecologic surgeries
- Anaerobic coverage added in bowel resections

Skin Preparation

- Bathing with regular soap the night before/morning of surgery
- Hair removal with clippers if necessary

Prevention of Hypothermia

- Use of air blanket devices
- Underbody warming mattresses
- Warmed intravenous fluid administration

Restricted Use of Abdominal Drains

- Drains placed to assure and detect unwanted occurrences
- Risks associated with drains (e.g., blockage, migration, infection)
- Utilization tailored to individual surgical procedures

Control of Perioperative Hyperglycemia

- Maintain blood glucose levels <200 mg/dL
- Reduction in insulin resistance

expiratory pressure 6–8 cm H₂O to prevent pulmonary complications

- Protective Measures
- Low tidal volumes, high positive end-expiratory pressure, and recruitment maneuvers intraoperatively

Minimally invasive surgery:

Laparoscopic surgery is associated with a decrease in the inflammatory and immunomodulatory response to surgery compared with open procedures. ERAS implementation in minimally invasive surgery is associated with further improvements in length of stay and cost. Minimal invasive surgery carries its own advantage such as decreased intraoperative and post-operative morphine equivalents, faster recovery, less pain, less interference with walking, reduced fatigue and increased patient satisfaction,.

Oncologic outcomes have been found to be equivalent in women undergoing minimally invasive surgery and open procedures for endometrial cancer but not for early stage cervical cancer. In fact, laparoscopy is the standard of care in endometrial cancers.

Perioperative Fluid Management/Goal-Directed Fluid Therapy:

Excessive usage of intravenous fluid has been associated with post-operative ileus, post-operative nausea and vomiting, and increased length of stay. Conversely, hypovolemia, if undetected, may lead to acute kidney injury, surgical site infections, sepsis, and delirium, as well as prolonged hospital stay.

The high fluid balances and liberal usage of fluids have shown to increase the length of hospital stay. For high-risk surgical patients, goal-directed fluid therapy with the use of fluids and inotropes to improve tissue perfusion and oxygenation is associated with improvements in short- and long-term outcomes (7). With the ERAS pathways, the fluid therapy is furthermore easier to implement as the patients are not prolonged fasted, receive carbohydrate loading solutions a day prior to the surgery and do not undergo mechanical bowel preparations.

Opioid Sparing Multimodal Post-operative Analgesia:

Importance of Optimizing Medications

- Associated with shorter hospital stays, lower readmission rates, and reduced costs
- Multimodal analgesia preferred to avoid opioid-related side effects and addiction risks

Non-Opioid Alternatives

- Non-steroidal anti-inflammatory drugs (NSAIDs)
- Acetaminophen
- Gabapentin
- Dexamethasone

Preoperative Medication Recommendations

- Oral acetaminophen, celecoxib, and gabapentin to reduce pain and opioid requirements.

Common Analgesic Techniques

- Incisional infiltration with bupivacaine or liposomal bupivacaine
- Thoracic epidural analgesia
- Transversus abdominis plane blocks

Considerations

- Local infiltration provides more control but may risk hypotension requiring inotropes.
- Thoracic epidural has efficacy and ease of placement but carries a 30% risk of failure.

Perioperative Nutrition:

A regular diet resumption within 24 hours is recommended to prevent the catabolic changes associated with the stress of the surgery. Maintenance of appropriate nutritional status post-operatively i.e. higher protein intake and adequate calorie intake helps in improving the return of bowel activity, reduces length of hospital stay, lowers infection rates, and equivalent complication rates as measured by wound healing, anastomotic leaks, or pulmonary complications. In the acute care setting, guidelines have recommended up to 2.0 g of protein/kg/day and 25–30 kcal/kg/day.

Prevention of postoperative ileus:

Rates of post-operative ileus are upto 30% among women undergoing open gynecologic cancer surgery. Factors that influence the return of bowel function include exposure to opioids, fluid balance, extent of peritoneal disease and

complexity of surgery, receipt of transfusion, and post-operative abdomino-pelvic complications. Practices that have shown to reduce the postoperative ileus rates are minimally invasive surgery, early feeding, coffee consumption and gum chewing. Early feeding, euvoemia, early ambulation, multi-modal analgesia and reducing opioids, also decrease the rate of post-operative ileus.

Alvimopan is an oral selective μ -antagonist that works directly within the gastrointestinal tract to block the negative effects of opioids on gut motility. Alvimopan has been approved by the US Food and Drug Administration (FDA) for use for patients undergoing planned bowel resection and the first dose is given pre-operatively, before opioid exposure.

Role of ERAS in Pelvic Exenteration and Hyperthermic Intra-Peritoneal Chemotherapy:

Total pelvic exenteration is a complex procedure having high complication rates of 60-90% with post-operative 30-day mortality being about 0.7% and the 90-day mortality 2.2%⁸. Urinary tract complications, wound dehiscence, infections, and organ system failure are common complications. Surgical complexity and patient's comorbidities increase the complications further. Hyperthermic intra-peritoneal chemotherapy (HIPEC) is also one procedure which has high complication rates with grade 3-4 morbidity in up to a third of patient.

Within such complexities, pre-operative optimization, counselling and early post-operative feeding, perioperative fluid management, thromboembolism prophylaxis, perioperative glucose control, and early mobilization translates into improved outcomes. In patients undergoing pelvic exenteration or HIPEC therapy, insulin resistance may accentuate the already high risk of perioperative complications. Therefore, carbohydrate loading should be considered, as it may attenuate the increased insulin resistance related to such prolonged and extensive surgery. Advanced hemodynamic monitoring is required to individualize fluid therapy and optimize oxygen delivery.

Discharge Policy:

It is recommended that during discharge, a comprehensive plan must be well explained to the patient and patient's caregivers must be educated in order to reduce the number of unplanned visits to the hospital. Therefore, elements of best practice include early resumption of feeding, avoidance of mechanical bowel preparations, euvoemia, normothermia, usage of patient education, optimizing the patient conditions preoperatively, adequate perioperative thromboprophylaxis, prevention of surgical site infection, ensuring of adequate pain control and usage of minimally invasive surgeries.

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SNAPSHOT

Postpartum hemorrhage

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Post partum hemorrhage (PPH) remains the most common cause of maternal mortality in the world and India.

The maternal mortality rate is 97 per one lakh live births as per (Sample Registration) SRS. Our aim is that no mother should die of PPH, because every mother counts. We know the causes of PPH - the 4 Ts – Tone, Tissue, Trauma, and Thrombin. The bundle approach is to be followed for managing PPH.

Follow the first response bundle with a call for help and active management of the third stage (10 IU Oxytocin IM, delayed cord clamping, controlled cord traction). Resuscitation and identification of the cause has to go hand in hand. Ensure the presence of a PPH tool kit, to save precious time.

Medical management can be done using Oxytocin, Methylergonovine, Misoprostol, and Carboprost (PG F2 alpha). Refractory cases will need Balloon tamponade (Condom, Bakri,

Chhattisgarh, Ellavi) and conservative surgical methods using the various uterine brace sutures- (B-Lynch, Hayman, and Cho sutures) and step-wise devascularization – Uterine artery, Ovarian- uterine anastomosis ligation, Internal artery ligation. Always remember decision for Hysterectomy should be early rather than late.

This management has to be strengthened with good teamwork, availability of blood and blood products, and quick referral services wherever required. The use of non-pneumatic anti-shock garments will help women survive the time required for the referrals. It is important to regularly train our staff and hold PPH drills so that all our staff is aware and trained enough to manage an emergency.

Link to the video:

<https://youtu.be/Wr-NUQOA-wY>

Balancing act: Holistic approaches to achieving Physical and emotional well-being

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Naturopathy is a system of human building in harmony with constructive principles, which is the principle of in nature that builds up, improves and repairs the human being on the physical, mental and moral planes. It primarily focuses on two main ideas: 1) holism, meaning that it looks at the whole body instead of just parts, and 2) vitalism, which highlights the body's natural ability to heal itself.¹ In naturopathy, healing relies majorly on the body's innate ability to heal itself, with external treatments serving as secondary support rather than the main solution.

Understanding Health

Understanding disease requires understanding what constitutes health. According to the World Health Organization, health as a state of complete physical, mental and social wellbeing and not merely the absence of disease or infirmity. However, this definition is often perceived as ambitious because it lacks clear guidelines on achieving such holistic health. Many healthcare providers tend to view health simply as the absence of disease.

The definition of health should be flexible enough to encompass the subjective perceptions of individuals and their interconnectedness with the environment. Naturopathy, as a holistic system of medicine, seeks to understand health beyond mere absence of disease and infirmity. It recognizes health as a collective reality that includes disease within its framework.

Scientists and public health experts advocate for a more pragmatic definition of health that respects individuals and their beliefs. Bircher and Kuruvilla have proposed a widely accepted definition, defining health as a state of well-being arising from the dynamic interactions

between individual potentials, life demands, and social and environmental determinants. They view health as an individual's ability to effectively manage life's diverse demands, whether physiological, psychological, or environmental, which vary across contexts such as socioeconomic status, gender, and work and leisure conditions. This definition prioritizes the individual's perspective over a disease-centric view, emphasizing resilience as key to achieving optimal health. Machteld Huber and colleagues further underscored the importance of resilience, proposing that health should encompass an individual's capacity to cope, maintain, and restore their integrity, balance, and sense of well-being.²

Vitality

The cornerstone of naturopathic medicine revolves around a central philosophy known as vitality, which is as intricate as naturopathy itself. However, there is often confusion surrounding vitality, with people mistakenly equating it with concepts like immunity or Prana in their efforts to quantify it. Vitality is distinct from immunity, mental vigor, or disease; it remains unaffected by diseased conditions, yet diminished vitality can predispose one to various illnesses. Disease, therefore, is merely a passing state that may manifest with physical, mental, or social symptoms, but it does not define health. Health is an ongoing process, not merely the absence of disease or infirmity.

Ellen Warner, a conventional physician, offered a poignant example in the Canadian Medical Association Journal to illustrate this concept. He recounted the story of a woman who underwent mastectomy for breast cancer. If we assume that the woman is healed solely because the disease has been removed, we overlook a crucial aspect:

her healing is incomplete until she is reassured that her femininity remains intact. This example underscores how wellness and health transcend the presence or absence of disease. Similarly, vitality mirrors health—it represents a state of resilience, an assurance of wholeness even in the face of disease or infirmity.

Bircher and Kuruvilla delineate two crucial phenomena termed as biologically given potential and personally acquired potential, shedding light on the essence of vitality and how one can maintain high vitality even in the face of illness. Biologically given potential encompasses the finite energy endowed upon an individual at birth, contingent upon genetic factors and the quality of prenatal development. Genetics extend beyond parental genes to encompass epigenetic influences during pregnancy. This innate energy or potential may diminish temporarily or permanently due to physical ailments, injuries, or congenital conditions.

On the other hand, personally acquired potential encompasses the culmination of all physiological, mental, and social resources accrued throughout life. This potential originates in utero and undergoes enhancement as we progress through life stages. Families, schools, communities, and friendships play pivotal roles in shaping this potential, empowering an individual's well-being and longevity.³

Naturopathic therapies are designed to support the body's inherent healing abilities and enhance vitality. The fundamental principles of naturopathy revolve around this core concept of enhancing vitality. It entails a shift in focus from a therapy-centered approach to a more holistic perspective.

Yoga: Cultivating Harmony Between Body and Mind

Yoga is an ancient practice that has been revered for its ability to promote physical strength, flexibility, and mental clarity. At its core, yoga is about union – the union of body, mind, and spirit. Through a combination of physical postures, breathwork, and meditation, yoga offers a holistic approach to well-being that

addresses the interconnectedness of our physical and emotional selves. The physical practice of yoga, known as asana, strengthens the body and increases flexibility while also calming the mind. Each posture is designed to engage different muscle groups and energy centres, promoting balance and harmony within the body.

In addition to its physical benefits, yoga is a powerful tool for managing stress and cultivating emotional resilience. Mindful breath work and meditation practices help to quiet the mind, reduce anxiety, and promote a sense of inner peace and calm.

Integrating Naturopathy and Yoga into Holistic Treatment Approaches

When combined, naturopathy and yoga offer a comprehensive approach to holistic well-being that addresses the needs of the whole person – body, mind, and spirit. Naturopathy provides the foundation for physical health, supporting the body's natural healing processes through nutrition, herbal medicine, and lifestyle interventions.

Yoga complements this approach by fostering harmony and balance within the body and mind, promoting flexibility, strength, and emotional resilience. Together, these practices empower individuals to take an active role in their health and well-being, cultivating a sense of balance and vitality that extends far beyond the yoga mat or herbal remedy. In our modern day living, where stress and imbalance are all too common, embracing holistic approaches like naturopathy and yoga can offer a pathway to greater health, happiness, and vitality. By honouring the interconnectedness of our physical and emotional selves, we can create a life that is truly in harmony – a true balancing act.

How to achieve Holistic Wellness through Yoga and Naturopathy

Achieving holistic wellness through Yoga and Naturopathy involves integrating physical, mental, and emotional well-being. The following steps could help one achieve holistic wellness with the help of Yoga and Naturopathy.

1. Physical Well-being

- Yoga Asanas - Regular practice of Yoga Asanas have been shown to improve flexibility, strength, and balance. Studies have demonstrated the positive effects of yoga on physical health, including reduced blood pressure, improved cardiovascular function, and relief from chronic pain.⁴
- Naturopathic Nutrition - Emphasizing a diet rich in whole foods, fruits, vegetables, and lean proteins can enhance physical health and vitality. Naturopathic principles advocate for the consumption of nutrient-dense foods and avoidance of processed and artificial ingredients.

2. Mental Well-being

- Yoga Breathing Techniques (Pranayama)- Pranayama practices, such as deep breathing and alternate nostril breathing, can promote relaxation and reduce stress and anxiety levels. Research indicates that pranayama techniques have a positive impact on mental health, helping to alleviate symptoms of depression and anxiety disorders.⁵
- Mindfulness Meditation - Incorporating mindfulness meditation, often integrated into yoga practice, can cultivate present-moment awareness and enhance mental clarity and focus. Studies have shown that mindfulness-based interventions are effective in reducing stress, improving mood, and enhancing overall psychological well-being.⁽⁶⁾

3. Emotional Well-being

- Yoga Philosophy and Self-Reflection: Exploring the philosophical principles of yoga, such as self-awareness and non-judgmental acceptance, can promote

emotional resilience and inner peace. Integrating self-reflection practices into yoga sessions allows individuals to cultivate a deeper understanding of their emotions and thought patterns.

- Naturopathic Stress Management - Naturopathic approaches to stress management may include herbal remedies, dietary supplements, and lifestyle modifications to support emotional balance and resilience. By integrating yoga and naturopathy practices into daily life, individuals can achieve holistic wellness by nurturing their physical, mental, and emotional health. These practices offer evidence-based approaches to promote overall well-being and enhance quality of life.

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RESEARCH HUB

Writing references for the scientific manuscripts

Proteesh Rana¹, Rachna Gupta²

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The scientific advances are generally built on past knowledge which needs to be acknowledged. An important mechanism of quoting any previous work is citation which provides credit acknowledgement to previous work. A citation is defined as a reference to a source of information like journal articles, books, conference proceedings, newspaper, website or other online content.¹ It ensures that any new work is presented in proper context with respect to the existing knowledge. Quoting anyone else work without crediting leads to plagiarism, which is considered unethical and can only be avoided by citing a reference of the source of information used by the author. The reference section therefore is an integral component of a scientific writing and comprises of all sources of literature that was referred to before, during and after the study. Since many medical graduates and academicians are involved in scientific writing or drafting research proposals, so it is essential to have understanding about correctly citing references from various literature sources. This paper provides a brief overview of commonly followed referencing styles in biomedical journals and addresses the basic queries of authors like why, when, where, what and how to cite references in a scientific manuscript.

Why to cite references

It is important for authors to understand the various objectives of citing references in a scientific manuscript. Firstly, citing a reference acknowledges and provides credit to the other's work or idea. Secondly, it permits readers to trace the original source of information cited in the manuscript. Thirdly, it provides the readers the scientific basis on which the present work could be understood and critically analyzed based on the existing knowledge. Moreover, it allows the

reader to compare and contrast the author's findings with the available scientific literature and establish credibility of one's own work.¹

When to cite references

The author should also understand "when" a reference needs to be provided in the manuscript. Referencing is essentially needed to acknowledge the source of information, definitions, theories, methods, techniques, formulas, diagram, pictures, to support or contradict a point of view and when paraphrasing another's ideas. The common information or undisputed facts in public domain may not need referencing but at times it is difficult to decide which facts or knowledge may be considered as common, as same may differ across various disciplines and socio-cultural backgrounds, so the dictum is "to cite, if in doubt".²

Where to cite references

Quoting of any previous work should be done by paraphrasing in one's own language and must be followed by a reference of the literature source. At times, the other's work, ideas or statement needs to be exactly copied in a manuscript which is referred as direct quoting and same needs be placed in quotation marks followed by its reference. The in-text reference should be placed immediately after quoting an idea or fact, so it may also appear in the middle of the sentence. The author should avoid pooling all references at the end of sentence especially while stating multiple facts from different references. Also, while citing multiple references to support a single fact, the referencing must be in a chronological order i.e the oldest reference must be cited first. The in-text referencing should be supported by the bibliographic details (like author name, source and date of publications)

given as reference list or bibliography, at the end of the manuscript. A reference list differs from bibliography in that it enlists only those literature sources that have been cited in the text while bibliography also includes sources which were consulted but not cited in the manuscript.¹

What to cite as references

The authors should preferably cite references from original research articles which are published and when preprints are cited, the same should be clearly mentioned in the reference. Citing a review article may be helpful in providing details of existing literature, however review articles may not reflect the original work accurately, so it's better to quote original research articles. The International Committee of Medical Journal Editors (ICMJE) in their latest recommendations have also advised authors to quote direct reference to original work whenever possible.³ However, citing multiple references to original work on a subject may result in an extensive list of references, so it's preferable to quote only key original references. In case there are extensive literature or studies on a topic, it is advisable to select most comprehensive and recent studies for citation as they would presumably discuss and reference to previous work. Author should not cite retracted articles and manuscripts from predatory journals. Also, references should not be used by authors or reviewers to promote self-citation or any other interests.

Referencing styles

A reference is defined by the British Standards Institution as "a set of data describing a document, sufficiently precise and detailed to identify it and enable it to be located".⁴ It is therefore important that each reference should have sufficient details and hence many standard formats have emerged for writing references. The two most commonly used styles for formatting references are the Harvard style and the Vancouver style. The Harvard style is commonly used in journals from the natural and social science subjects but most biomedical journals have adopted the Vancouver style.

In the Harvard style, the reference is cited in the

text with author name and year of publication, hence it's also called the parenthetical author-date referencing system. The references cited in the manuscript are listed as bibliography which are arranged alphabetically according to the author's name. It was first used by an American zoologist from Harvard University, Edward Laurent mark, in his landmark cytological monograph published in year 1881. The Harvard referencing is defined as "a system in which names and dates are given in the body of the text and the references alphabetically at the end of the paper". A popular example of author-date referencing system is American Psychological Association (APA) style that includes parenthetical in-text citations and a reference list at the end of the manuscript.⁴ However, the Harvard system is criticized as it is not reader friendly and creates difficulties for reader by disrupting the text flow with author names especially when multiple references are cited in paragraph.

The Vancouver style is the most common referencing style used in biomedical journals and is also recommended by the International Committee of Medical Journal Editors (ICMJE).³ In the Vancouver style, a number is assigned to each reference and that number is cited each time that reference is used in the manuscript, therefore it's also called the author-number referencing system. The number cited in the manuscript is usually placed at the end of the text punctuation to avoid disruption of the text flow. At the end of the manuscript all citations in text are listed in numerical order in a reference list. The Vancouver style was developed in 1978, at Vancouver, British Columbia, Canada by an international committee of editors from various medical journals. This committee drafted guidelines to standardize the ethical and submission instructions for the biomedical journals. The guidelines were later published as "Uniform Requirements for Manuscripts Submitted to Biomedical Journals". The Vancouver referencing format has also been adopted by the US National Library of Medicine (NLM) for its database. The advantage of the Vancouver style is that the manuscript less

obstructive and can be read more easily as compared to the Harvard style. Moreover, the references are directly correlated to numbers and saves the reader time in searching them alphabetically according to authors name in the bibliography.⁴

How to write references

The general format for the Vancouver style referencing for a journal article has authors name, article title, journal title, date of publication, volume (issue) and pagination. In Vancouver style, the journal name is written in their accepted abbreviation as published in the NLM's annual publication 'list of journals indexed in Index Medicus'.⁵ In the references, up to six authors, all are listed and when a manuscript has more than six authors, first six authors are listed followed by et al. Many journals and publication houses have also introduced specific variations in the referencing style like some journals list only initial three authors followed by et. al., so it is advisable to consult the 'instructions for authors' section of a journal before submitting the manuscript. In additions, one may provide standard identifier of the manuscript like digital object identifier (DOI), PMID (PubMed ID), Google Scholar, or Weblink, for an easier access to the referencing source. The other common sources of citation in a scientific manuscript are from internet webpage and books. The Vancouver format for an internet reference has author name, article title, type of medium, place of publication, publisher, date of publication, date of citation and availability. The general format for referencing for a book in the Vancouver style has authors/editors name, book title, edition, place of publication, publisher, date of publication and pagination. The essential elements and general format for writing references in the Vancouver style for journal article, book and an internet webpage are given in table-1.

Referencing errors

A well referenced manuscript not only helps readers to connect with pervious work but also supports the novelty and value of the present work. However, in spite of the importance of

Table-1: General format for a reference to different literature sources in Vancouver style

<p>Reference format for a journal article: <i>Authors name/ Article title/ Journal title/ Date of publication/ Volume (Issue)/ Pagination</i> Chavan S, Rana P, Tripathi R, Tekur U. Comparison of efficacy & safety of iron polymaltose complex & ferrous ascorbate with ferrous sulphate in pregnant women with iron-deficiency anaemia. Indian J Med Res. 2021;154(1):78-84. Author's name: Chavan S, Rana P, Tripathi R, Tekur U. Article title: Comparison of efficacy & safety of iron polymaltose complex & ferrous ascorbate with ferrous sulphate in pregnant women with iron-deficiency anaemia. Journal title: Indian J Med Res. Volume (Issue): 154(1) Pagination: 78-84</p>
<p>Reference format for a Book: Authors/Editors name, Book title, Edition, Place of publication, Publisher, Date of publication/ Pagination. Patrias K. Citing medicine: the NLM style guide for authors, editors, and publishers. 2nd ed. Bethesda (MD): National Library of Medicine (US); 2007: 22-25 Author's name: Patrias K Article title: Citing medicine: the NLM style guide for authors, editors, and publishers. Edition: 2nd ed. Place of publication: Bethesda (MD) Publisher: National Library of Medicine (US) Year: 2007 Pagination: 22-25</p>
<p>Reference format for a webpage: Author name/ Article title/ Type of medium/ Place of publication/ Publisher/ Date of publication/ Date of citation/ Availability Hooper JF. Psychiatry & the Law: Forensic Psychiatric Resource Page [Internet]. Tuscaloosa (AL): University of Alabama, Department of Psychiatry and Neurology; 1999 Jan 1 [updated 2006 Jul 8; cited 2007 Feb 23]. Available from: http://bama.ua.edu/~jhooper/. Author's name: Hooper JF. Article title: Psychiatry & the Law: Forensic Psychiatric Resource Page Type of medium: Internet Place of publication: Tuscaloosa (AL) Publisher: University of Alabama, Department of Psychiatry and Neurology; Date of publication: 1999 Jan 1 Date of updating/citation: updated 2006 Jul 8; cited 2007 Feb 23 Availability: http://bama.ua.edu/~jhooper/.</p>

referencing in a scientific manuscript, it continues to be the most neglected aspect. Data suggest that misquotation errors are seen in 10-20% and bibliographic errors are observed in 50-70% in references published across various journals.⁴ The referencing errors makes difficult for readers to correctly interpret author's work and to retrieve cited reference for further reading on the given topic. In addition, referencing errors result in failure to acknowledge the cited author and leads to inaccuracies in citation index. These errors can be minimized if author reviews the complete original articles and careful in paraphrasing its facts. It is poor practice to cite references after just reading the abstract instead of the whole article and copying bibliographic details from previous manuscripts. A simple way to avoid these referencing errors is to verify the cited text and bibliographic details from the original literature source. ICMJE recommends that references should be verified from electronic bibliographic sources like PubMed or from printed copies of the original literature sources. Referencing errors may also be reduced by using reference management software's like EndNote, Mendeley, Zotero etc. which aid authors to correctly format references in different referencing styles.

In summary

Authors should keep in mind the various objectives of proper referencing while writing a scientific manuscript. It is advisable to cite

references from original journal articles which are comprehensive and recently published. Authors, must be conversant with the general format of quoting various literature sources especially in the Vancouver style (the author-number system) which is the most common referencing formant in biomedical journals. The referencing errors should be minimized by verifying references from electronic bibliographic sources or using references management software's. Overall, a well referenced manuscript supports not only supports novelty and quality of the scientific work but also promotes the author's credibility.

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JOURNAL SCAN

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HPV genotypes and risk of persistence and progression in women undergoing active surveillance for cervical intraepithelial neoplasia grade².

Damgaard R, Jenkins D, Stoler MH, de Koning MC, van de Sandt MM, Lycke KD, Kahlert J, Gravitt PE, Quint WV, Steiniche T, Petersen LK, Hammer A

Am J Obstet Gynecol. 2024 Feb 7:S0002-9378(24)00072-3.

BACKGROUND

In recent years, active surveillance has been introduced as an alternative to excisional treatment in younger women with cervical intraepithelial neoplasia grade 2 (CIN2) since regression rates are high and because excisional treatment is associated with increased risk of preterm birth. However, early identification of women at increased risk of persistence/progression is important to ensure timely treatment. Evidence is limited on biomarkers that may be used to identify women at increased risk of persistence/progression.

OBJECTIVE

Here, we aimed to describe HPV type-specific persistence/progression in women undergoing active surveillance for CIN2.

STUDY DESIGN

We conducted a historical cohort study on women aged 23-40 years diagnosed with CIN2 at Aarhus University Hospital, 2000-2010. Women were identified through the Danish Pathology Data Bank (DPDB) and were considered as undergoing active surveillance if they had a first record of a cervical biopsy within two years after index diagnosis and no LEEP prior to this. Archived tissue samples underwent HPV genotyping using the HPV SPF10-DEIA-LiPA25 system (DNA ELISA kit HPV SPF10 and RHA Kit HPV SPF10-LiPA25). Persistence/progression were defined as having a record of e⁺CIN2 in the DPDB determined on the last and worst diagnosis on a biopsy or Loop Electrosurgical

Excision Procedure (LEEP) specimen during follow-up. We estimated the relative risk (RR (95% CI)) of persistence/progression using a modified Poisson model.

RESULTS:

A total of 455 women were included. Two-thirds were ≤ 30 years (73.8%) at index diagnosis, and nearly half had a high-grade index cytology (48.8%). Overall, 52.2% of all women had e⁺CIN2 during follow-up; 70.5% in HPV16 positive and 29.5% in those positive for other HPV types. HPV16 was associated with a significantly higher risk of persistence/progression (RR 1.64 (95% CI (1.37-1.95))) compared to non-HPV16. The risk persistence or progression was highest in HPV16-positive women with a high-grade index cytology compared to HPV16-positive women with a low-grade cytology (RR 1.29 (95% CI (1.03-1.61-))), whereas no differences were observed across age groups.

CONCLUSION

Highest risk of persistence/progression was observed among HPV16-positive women, particularly in those with an associated high-grade cytology. These findings suggest that early excisional treatment should be considered in this group of women.

AUTHOR COMMENTS

The article explores the utility of HPV genotyping and associated cytology in the management of cervical intraepithelial neoplasia grade 2 (CIN2) in women undergoing active surveillance. This approach is motivated by concerns about the potential risks associated with loop electrosurgical excision procedures (LEEP) and the high likelihood of regression in CIN2 cases. The authors aim to elucidate the risk of persistence or progression based on HPV genotype, providing valuable insights for personalized treatment strategies.

The study setting in Denmark, where active surveillance has been practiced since 1995, provides a unique opportunity to assess long-

term outcomes in this cohort. Utilizing archived tissue specimens for HPV genotyping and leveraging nationwide registries for follow-up, the study offers comprehensive data analysis with minimal risk of selection bias.

Key findings indicate that HPV16-positive women with CIN2 face a significantly higher risk of persistence or progression compared to those with non-HPV16 genotypes. Importantly, the study reveals that the risk assessment based on HPV genotype and cytology is more predictive than age alone, challenging previous assumptions regarding age-related risk stratification.

The clinical implications of these findings are profound. They suggest that HPV genotyping and associated cytology could serve as valuable tools for risk-based management of CIN2. Specifically, HPV16-positive women with high-grade cytology may benefit from immediate LEEP, while those with non-HPV16 genotypes and low-grade cytology may safely undergo active surveillance. These recommendations align with current practices in some countries and emphasize the importance of personalized treatment approaches tailored to individual risk profiles.

However, the study acknowledges certain limitations, including the lack of information on colposcopic findings and the inability to establish causal HPV genotypes in cases of multiple infections. Additionally, the generalizability of the findings may be limited to populations with similar HPV genotype distributions and eligibility criteria.

In conclusion, the study underscores the potential clinical value of HPV genotyping and cytology in guiding the management of CIN2, offering insights that could optimize patient care and minimize unnecessary interventions. Further research exploring additional biomarkers and validation studies are warranted to enhance risk stratification and improve treatment outcomes for women with CIN2.

Ultrasound and MRI-based investigation of the role of perfusion and oxygen availability in menstrual pain.

Cockrum RH, Tu FF, Kierzkowska O, Leloudas N, Pottumarthi PV, Hellman KM.

Am J Obstet Gynecol. 2024 Jan 29:S0002-

9378(24)00059-0.

BACKGROUND

The mechanisms responsible for menstrual pain are poorly understood. However, dynamic noninvasive pelvic imaging of menstrual pain sufferers could aid in identifying therapeutic targets and in testing novel treatments.

OBJECTIVE

To study the mechanisms responsible for menstrual pain, we analyzed ultrasonographic and complementary functional Magnetic Resonance Imaging (fMRI) parameters in dysmenorrhea sufferers and pain-free controls under multiple conditions.

STUDY DESIGN

We performed fMRI on participants with and without dysmenorrhea during menses and non-menses. To clarify whether regional changes in oxygen availability and perfusion occur, fMRI R2* measurements were made of the endometrium and myometrium. R2* measurements are calculated nuclear magnetic resonance relaxation rates sensitive to the paramagnetic properties of oxygenated and deoxygenated hemoglobin. We also compared parameters before and after an analgesic dose of naproxen sodium. In addition, we performed similar measurements with Doppler ultrasonography to identify whether changes in uterine arterial velocity occurred during menstrual cramping in real time. Mixed model statistics were performed to account for within-subject effects across conditions. Corrections for multiple comparisons were made with a false discovery rate adjustment.

RESULTS

During menstruation, a notable increase in R2* values, indicative of tissue ischemia, was observed in both the myometrium (beta \pm standard error of the mean: 15.74 ± 2.29 s⁻¹, p = 0.001, q = 0.002) and the endometrium (26.37 ± 9.33 s⁻¹, p = 0.005, q = 0.008) among participants experiencing dysmenorrhea. A similar increase was noted in the myometrium (28.89 ± 2.85 s⁻¹, p = 0.001, q = 0.002) and endometrium (75.50 ± 2.57 s⁻¹, p = 0.001, q = 0.003) among pain-free controls. Post-hoc analyses revealed that R2* values during menstruation were significantly higher than those in participants with dysmenorrhea (Myometrium: p = 0.008, Endometrium: p = 0.043). Whereas naproxen

sodium increased endometrial R2* in participants with dysmenorrhea ($48.29 \pm 15.78 \text{ s}^{-1}$, $p = 0.005$, $q = 0.008$),

it decreased myometrial R2* in pain-free controls. Doppler findings were consistent with fMRI ($-8.62 \pm 3.25 \text{ s}^{-1}$, $p = 0.008$, $q = 0.011$). The pulsatility index (-0.42 ± 0.14 , $p = 0.004$, $q = 0.004$) and resistance index (-0.042 ± 0.012 , $p = 0.001$, $q = 0.001$) decreased during menses compared with non-menses, and

effects were significantly reversed by naproxen sodium. Naproxen sodium had the opposite effect in pain-free controls. There were no significant real-time changes in the pulsatility index, resistance index, peak systolic velocity, or minimum diastolic velocity during episodes of symptomatic menstrual cramping.

CONCLUSIONS

fMRI and Doppler metrics suggest participants with dysmenorrhea have better perfusion and oxygen availability than pain-free controls. Naproxen sodium's therapeutic mechanism is associated with relative reductions in uterine perfusion and oxygen availability. An opposite pharmacological effect was observed in pain-free controls. During menstrual cramping, there is insufficient evidence of episodic impaired uterine perfusion. Thus, prostaglandins may have protective vasoconstrictive effects in pain-free controls and opposite effects among participants with dysmenorrhea.

AUTHOR COMMENTS

The study published in the American Journal of Obstetrics and Gynecology sheds light on the complex mechanisms underlying menstrual pain, particularly dysmenorrhea, utilizing dynamic noninvasive pelvic imaging techniques. Led by Cockrum and colleagues from various esteemed institutions, including the University of Chicago and Northshore University Health System, the research provides valuable insights into the role of perfusion and oxygen availability in menstrual pain.

Menstrual pain, a common yet poorly understood phenomenon, can significantly impact the quality of life for many individuals. By employing functional Magnetic Resonance

Imaging (fMRI) and Doppler ultrasonography, the researchers aimed to elucidate the physiological changes occurring in dysmenorrhea sufferers compared to pain-free controls during menstruation and non-menstrual periods.

The findings of the study highlight intriguing differences between participants with dysmenorrhea and pain-free controls. Notably, dysmenorrhea sufferers exhibited increased R2* values, indicating tissue ischemia, in both the myometrium and endometrium during menstruation. Surprisingly, pain-free controls also demonstrated similar increases in R2* values, albeit to a lesser extent. These results challenge conventional assumptions and suggest that dysmenorrhea may not necessarily be associated with reduced perfusion or oxygen availability in the uterus.

Moreover, the study elucidates the therapeutic mechanism of naproxen sodium, a commonly used analgesic for menstrual pain. While naproxen sodium increased endometrial R2* in dysmenorrhea sufferers, indicating improved oxygen availability, it decreased myometrial R2* in pain-free controls. These contrasting effects underscore the differential response to pharmacological interventions between individuals with and without dysmenorrhea.

The Doppler ultrasonography findings further corroborate the fMRI results, revealing dynamic changes in uterine arterial velocity during menstruation and non-menstrual periods. Interestingly, naproxen sodium reversed these changes, suggesting its potential modulatory effects on uterine perfusion.

Overall, the study provides valuable insights into the pathophysiology of menstrual pain and the therapeutic mechanisms of common analgesics. By elucidating the role of perfusion and oxygen availability, the research paves the way for targeted therapeutic interventions and personalized management strategies for individuals with dysmenorrhea. However, further research is warranted to validate these findings and explore additional factors contributing to menstrual pain.

EVENTS HELD

1. AOGD Oncology Committee organized the 2nd webinar of the series on Gearing Up for the 90:70:90 Challenge On 3rd February on the occasion of World Cancer Day!
2. AOGD Endometriosis and Endoscopy committee organised a CME on Suturing and Knotting techniques on 03.02.2024 at MEU HALL, SJ Auditorium, LHMC & SSKH, New Delhi
3. AOGD and Delhi PG Forum organized a Case discussion on "Multiple Pregnancy" on 19.02.24
4. An online webinar on "Subdermal Contraceptive Implant: A new addition to the basket of contraceptive choices" was organized by-FOGSI Family Welfare Committee In association with AOGD on 28.02.2024
5. Adolescent Sub Committee of AOGD organised a CME on adolescent vaccination in Cloudnine hospital, Patparganj on 28.02.24
6. AOGD Oncology Committee organized the online 3rd webinar of the series on Gearing Up for the 90:70:90 Challenge on 28.02.2024

PROCEEDINGS OF MONTHLY CLINICAL MEETING

AOGD monthly Clinical Meeting

VMMC & Safdarjung Hospital, New Delhi; 23rd February, 2024

Persistent period pain: Time to shift the lens(Accessory Cavitated Uterine Mass-an Evolving Mullerian Anomaly)

Sheeba Marwah¹, Anugeet Sethi², Puja Yadav², Neha Rathore², Bindu Bajaj³, Anjali Dabral³

¹Associate Professor, ²Senior Resident, ³Professor & HAG

Background

Around 50-90% of women in reproductive age group experience dysmenorrhea which is severe in 10% affecting quality of life. One third of these women have a Müllerian anomaly, diagnosing which is an immense challenge due to the variability in presentation, clinical overlap, need for expertise, and the psychosocial impact it entails on lives of women and their family members. Keeping this in mind, a case series of three such challenging cases of persistent period pain are presented, that were encountered in the department in the last one year.

Case1

A 32 year old unmarried female presented with complaint of chronic pelvic pain since menarche, which gradually increased over the last 2 years; she was being treated on the line of endometriosis all this while, but in vain. Her examination was unremarkable. A pelvic ultrasound (USG) revealed a right sided 4*4 cm endometrioma, but MRI was suggestive of accessory cavitated uterine mass (ACUM). Laparotomy along with excision of ACUM performed. Intraoperatively, ACUM was present medial to the round ligament attached to the right uterine wall with 15ml of collected blood drained from ACUM. Histopathology corroborated the diagnosis of ACUM. Her post-op period was un-eventful and patient resumed her menses after 1 month.

Case2

A 30 years old, A1 female visited infertility clinic

with complaints of severe dysmenorrhea and dyspareunia along with inability to conceive since 2 years. Her menstrual cycles were regular with normal flow. On per-vaginal examination a mass of ~ 4x5cm was felt through right fornix, not separate from the uterus with mild tenderness. A transvaginal scan showed presence of sub-serosal fibroid of 4x3 cm in fundus region of uterus. However, MRI revealed a thick walled cavitory lesion of size 4.1x3.6 cm suggestive of ACUM. She underwent laparotomy with excision of ACUM, wherein the right cavitated lesion was excised by circumferential subcapsular/ subserosal plane dissection. Sample retrieved was sent for histopathology which showed accessory uterine cavity with a lining epithelium with large collection of hemosiderophages. The post-operative period was uneventful with normal resumption of menses and alleviation of symptoms.

Case 3

A 19 year old unmarried girl reported with severe dysmenorrhea since 1yr, associated with nausea and vomiting, relieved only with injectable analgesics. On local examination, external genitalia was normal. Her trans-abdominal USG showed the presence of 3.7 x4.7 cm relatively well-defined hypoechoic lesion circumferentially surrounded by isoechoic myometrial tissue, adjacent to insertion of round ligament with hemorrhagic content within; same corroborated with MRI too. A laparotomy was planned. Per-operatively a left sided ACUM excised. Histopathology confirmed preoperative diagnosis.

Conclusion

High clinical index of suspicion for Mullerian anomalies should be kept in women with severe dysmenorrhea, which warrants further evaluation by MRI/3D USG. A multidisciplinary approach needs to be adopted with radiologists and pathologists. Minimal invasive methods to tackle ACUM need to be explored further, especially for young nulliparous girls.

A rare abdominal mass

Sumedha Gupta, Archana Mishra

Background

Mature cystic teratomas represent 10–20% of all ovarian neoplasms, with malignant transformation being rare, occurring in only 0.1–2% of cases. Among these transformations, malignant melanoma is particularly uncommon.

Case report

We present the case of a postmenopausal woman who presented with abdominal pain, subsequently diagnosed with a ruptured mature dermoid cyst with abdominal metastasis. Following exploratory laparotomy, she underwent staging procedures, including total abdominal hysterectomy with bilateral salpingo-oophorectomy and removal of melanotic deposits from various abdominal sites. This case represents another instance of primary malignant melanoma originating within a mature cystic teratoma, a rare phenomenon first reported in 1901 with only approximately 45 additional cases documented to date. Our report adds to this limited body of literature, highlighting the importance of recognizing and managing such rare occurrences in clinical practice.

Transient idiopathic late onset non immune hydrops fetalis – an enigma


Shreya Singh Kushwaha, Upma Saxena, Sujata Das

Case report

23 year old G3P1L1A1 presented at 27+4 weeks to antenatal OPD with an USG report suggestive of fetal hydrops. She had a non-consanguineous marriage for last 6 years. Her previous pregnancy was uneventful and she delivered a healthy male baby of 2.3kg 5 years back. There was no family history of genetic disorders and her three generation pedigree chart was normal. Her NT NB scan, FT combined screening and Level 2 scan were normal. A USG done at 26weeks showed ascites and B/L pleural effusion. A detailed scan confirmed the findings and additionally showed placentomegaly and scalp edema. Patient was counselled regarding probable causes of hydrops. Her blood group was B positive and the ICT and serum extended antibody panel was negative. So the diagnosis of non immune hydrops (NIHF) was made. Maternal causes like hematological disorders, syphilis and TORCH infections were excluded. Fetal structural malformations, placental and cord abnormalities, aneuploidies, deletions, duplications, single gene disorders, fetal infections including parvovirus B19 were also ruled out. In her follow up scans from 35 weeks onwards there was no evidence of hydrops. She had PROM at 37+5 weeks and had vaginal delivery of a male baby of 2.4 kg. On postnatal evaluation there was no clinical or radiological evidence of hydrops. Placenta and umbilical cord were normal on gross and histopathological examination so it was transient idiopathic type. NIHF does not always spell doom as it can have good outcomes, as in the present case.


FORTHCOMING EVENTS

1. The Infertility Subcommittee of AOGD is organizing a webinar on Tubal Factor Infertility on 5th March from 2.30 to 4.30 pm.
Dr. Jyoti Bhaskar
Dr. Alpana Singh
2. AOGD and Delhi PG Forum will be organizing a Case discussion on "Contraception in special circumstances" on 18th March 2024 at 7:00 -8:30 pm.




TUBAL FACTOR INFERTILITY CME
Organised by: AOGD Infertility Subcommittee
Date: 5 March, 2024 | Time: 2:30 - 4:30 PM

GUEST OF HONOUR



Dr. Amita Suneja
President AOGD

ORGANISING CHAIRPERSONS




Dr. Manju Khemani
Chairperson Infertility Subcommittee

Dr. Jyoti Bhaskar
Member Infertility Subcommittee

Dr. Alpana Singh
Member Infertility Subcommittee

MOC: Dr. Neha Kapoor		
Time	Topic	Speaker
2:30 - 2:40 PM	Welcome Address	Dr. Alpana Singh
Session 1		
Chairpersons: Dr. Archana Mehta, Dr. Leena Wadhwa, Dr. Jyoti Bali		
2:40 - 3:00 PM	Evaluation of Tubal Factor Infertility	Dr. B Kalpana
3:00 - 3:10 PM	Discussion	
Chairpersons: Dr. Bindu Bajaj, Dr. Renu Tanwar, Dr. Jyoti Bhaskar		
3:10 - 3:30 PM	Tips & Tricks During Hysterolaprosopic Tubal Surgery	Dr. Jyoti Misra
3:30 - 3:40 PM	Discussion	
Session 2		
3:40 - 4:20 PM	Panel Discussion: Tubal Factor Infertility & It's Management Panelists: Dr. Shikha Jain, Dr. Astha Gupta, Dr. Rhythm Ahuja, Dr. Ankita Sethi, Dr. Shahida Naghma, Dr. Arifa Anwar, Dr. Deepali Garg	Moderators: Dr. Sunita Arora Dr. Pikee Saxena
Vote of Thanks		

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Association of Obstetricians & Gynecologists of Delhi
Invites you to
DELHI PG FORUM
Case Discussion on
CONTRACEPTION IN SPECIAL CIRCUMSTANCES

Post Graduates of Maulana Azad Medical College, Delhi
Monday, 18th March, 2024 | 7:00 - 8:30 PM

CHAIRPERSON



Dr. Neena Malhotra
Professor Obs Gynae
HOD AIIMS

MODERATORS



Dr. Vidhi Chaudhary
Professor
Obstetrics & Gynecology
Lady Hardinge Medical College, Delhi



Dr. Vidushi Kulshrestha
Additional Professor
AIIMS, New Delhi

**COORDINATOR
DELHI PG FORUM**



Dr. Sunita Malik
**CO-COORDINATOR
DELHI PG FORUM**



Dr. Shivani Agarwal

PG RESIDENTS



Dr. Tanisha Gupta



Dr. Bakkireddy Sai Sree

AOGD OFFICE BEARERS



Dr. Amita Suneja
President



Dr. Abha Sharma
Vice President



Dr. A.G. Radhika
Hon. Secretary



Dr. Seema Prakash
AOGD Coordinator

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3. Next AOGD monthly clinical meeting will be held offline on 27th March 2024 at 4-5pm; organized by UCMS & GTB Hospital, New Delhi

Calendar of Virtual Monthly Clinical Meetings 2023-24

Date	Name of Institution
27 th , March, 2024	UCMS & Guru Teg Bahadur Hospital
19 th April, 2024	LHMC & Smt. Sucheta Kriplani Hospital
31 st May, 2024	B L Kapoor Hospital



THE ASSOCIATION OF OBSTETRICIANS AND GYNECOLOGISTS OF DELHI
GENERAL BODY MEETING, AOGD HAND OVER & CLINICAL PRESENTATION
 Venue: Lecture Theatre 1, UCMS College Block
 27th March, 2024 | 1:00 - 5:30 PM

Organised By
 Association of Obstetricians and Gynecologists of Delhi
 UCMS & GTB Hospital, Delhi

PROGRAM

1:00 - 1:45 PM
Lunch

1:45 - 4:00 PM **GBM & AOGD Hand Over**
1:45 - 2:15 PM
 • Welcome Address
 • Felicitation of Seniors & Subcommittee Chairpersons
 • Dr S.N. Mukherjee Trophy Award

2:15 - 3:00 PM
AOGD 2023-24 Term Report

3:00 - 3:55 PM
Formal Handing Over of AOGD Office &
Introduction of New Team (2024-25)

3:55 - 4:00 PM
Vote of Thanks

4:00 - 5:00 PM **Monthly Clinical Meeting**

5:00 - 5:10 PM
Update on Mirena

Meeting Organizer
 **CONFERENCES INTERNATIONAL**

Dil Se



Dr Seema Prakash

*Do I still look beautiful
With few of these skin wrinkles
As well as mood that dwindles*

*Do I still look beautiful
With this feeling of lack of desire
And some moments of intolerable fire*

*Do I still look beautiful
With so many aches and pain
And suffering with inactivity of brain*

*Do I still look beautiful
Keeping awake at night like an insomniac
Lipid profile that make me prone for disease cardiac*

*Do I still look beautiful
In a body that is sagging
In a life that is lagging*

*Do I still look beautiful
With loved ones on another continent
With a fear of becoming incontinent*

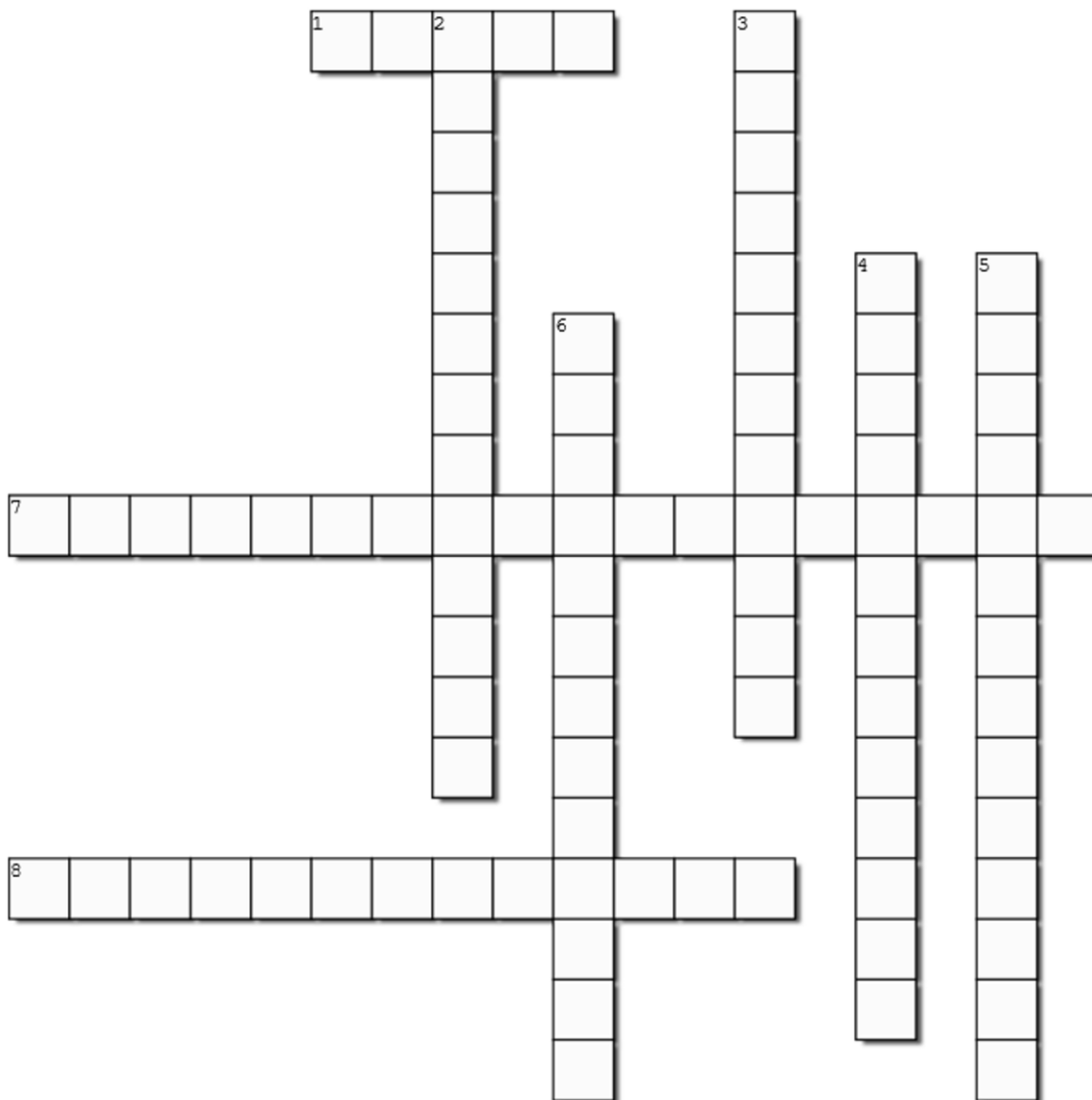
*Do I still look beautiful
Dealing with all the life issues
Taking care of all the body tissues*

**Yes
I still look beautiful**

CROSS WORD

Bhanupriya

complete the crossword



Across

1. What is the criteria for assessment of frailty
7. The pattern of diet in post operative period is called
8. Which type of fluid is given to patients with gastric fluid drainage or diuretic derangement

Down

1. The use of ____ reduces volume overload during fluid therapy
2. Which preoperative drink reduces postoperative insulin resistance
3. The primary outcome of ERAS protocol is to reduce
4. What is the fluid of choice during intraoperative crystalloid administration
5. What is the gold standard for assessment of volume status in goal directed fluid therapy

Fried, infusion pump, carbohydrate, complications, ringer lactate, stroke volume, patient controlled, normal

AOGD Risk Management Support [ARMS] Group

One of the ways to ensure stress-free work environment and optimal patient care is mutual support among professional colleagues. An advisory group was set up last year so that they can be contacted if any of us is caught in a complex clinical dilemma / dealing with aggressive clients or is apprehensive about how to document or effectively troubleshoot a potential problem. The same group will continue to provide timely advice and is led by

Convener- Dr. Vijay Zutshi- 9818319110

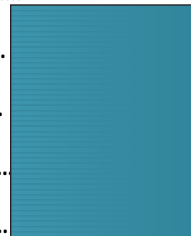
Co convener- Dr. Aruna Nigam- 9868656051

We invite suggestions from all members regarding functioning of this cell which will guide us forming the SOPs. Pl mail to aogd.ucmsgtbh2023@gmail.com

AOGD Sub - Committee Chairpersons 2023-25			
Committee	Chairperson	Contact No	Email id
Adolescent Health Sub-Committee	Dr Jyoti Bhaskar	9711191648	jyrbhaskar@yahoo.com
Endometriosis Sub-Committee	Dr Reena Yadav	9868996931	drreenalhmc@gmail.com
Endoscopy Sub-Committee	Dr Swati Agrawal	9810181964/ 9953938995	drswatilhmc@gmail.com
Fetal Medicine & Genetics Sub-Committee	Dr Sangeeta Gupta	8368199481/ 9968604349	drsangeetamamc@gmail.com
Oncology Sub-Committee	Dr Saritha Shamsunder	9313826748	shamsundersaritha@gmail.com
QI Obst & Gynae Practice Sub-Committee	Dr Kiran Aggarwal	9312277346	dr_kiranaggarwal@hotmail.com
Urogynaecology Sub-Committee	Dr Monika Gupta	9312796171	drmonikagupta@hotmail.com
AOGD Sub - Committee Chairpersons 2022-24			
Committee	Chairperson	Contact No	Email id
Breast and Cervical Cancer Awareness, Screening & Prevention sub-committee	Dr Mrinalini Mani	9911835888	drmrinal5@gmail.com
Infertility & Reproductive Endocrinology sub-committee	Dr Manju Khemani	9810611598	dr.manjukhemani@gmail.com
Community Health & Public Awareness sub-committee	Dr Shivani Agarwal	9868249464	dragarwal.shivani@gmail.com
Safe Motherhood sub-Committee	Dr Kiran Guleria	9811142329	kiranguleria@yahoo.co.in

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Date of Birth: Date.....Month Year.....
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Proposed by
Cheque/DD / No:



Cheque/Demand Draft should be drawn in favour of: **AOGD 2023**

FOR ONLINE TRANSFER THROUGH NEFT/RTGS

Name of Bank: Canara Bank
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Name of Account: AOGD 2023
Account no: 110112345909
IFSC code: CNRB0003009
MICR code: 110015088

For Life Membership : Rs. 11,000 + Rs. 1,980 (18% GST applicable) = Rs. 12,980
For New Annual Membership* : Rs. 2,000 + Rs. 360 (18% GST applicable) = Rs. 2,360
For Old Renewal Membership+ : Rs. 1,200 + Rs. 216 (18% GST applicable) = Rs. 1,416
Encl.: **Attach Two Photocopies of All Degrees, DMC Certificate and Two Photographs (Self atested)**

*-Annual Membership is for the calendar year January to December.
+ - In case of renewal, mention old membership number. Note: 18% GST will be applicable as FOGSI requires it.



Send Complete Membership Form Along With Cheque / DD and Photocopy of required documents.

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- Onco fertility program for cancer patients
- Laser Assisted Hatching
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- ERA Test
- Follicular Monitoring
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Dr. Surveen Ghuman Sindhu
Senior Director & HOD



Dr. Sweta Gupta
Director



Dr. Tanya Buckshee Rohatgi
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Dr. Shalini Chawla Khanna
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Dr. Ritu Hinduja



Dr. Sulbha Arora



Dr. Swapna Y



Dr. Vandana Bhatia

For more details, contact

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