



AOGD BULLETIN



Volume 15; Issue No.1; May 2015

Price: ₹30 only



Dedicated Issue:
Adolescent Health



Promote Health
Protect Rights
Provide Quality Services

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Publisher/Printer/Editor

Dr Jyotsna Suri on behalf of Association of Obstetricians and Gynaecologists of Delhi.

Printed at

Process & Spot C-112/3, Naraina Industrial Area, Phase-1, New Delhi 110 028

Published from

AOGD Office: Room No.118, Ward No. 8, Department of Obstetrics & Gynaecology, Vardhman Mahavir Medical College & Safdarjung Hospital New Delhi-110 029

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Message from the President



Dear AOGD Family,

Warm Greetings to all of you and My heartiest gratitude for giving me this opportunity to serve you!

I with my team feel proud in accepting the mantle of AOGD. Our emphasis this year would be on moving ahead for reenergising older and creating new programmes, as well as continuing to pursue the responsibilities with full diligence and dedication. We are committed to improve the health of both mother and child. In order to further this goal we shall be working on the theme for this year, *“Promote Health, Protect Rights, and Provide Quality Services for mother and child”*.

Health of an adult depends upon healthy reproductive development and experiences during adolescent years. It is undeniable that a healthy adolescent can blossom into a healthy adult and therefore a healthy parent. Realising the importance of adolescent reproductive health we shall begin the year with various activities intending to promote the knowledge of health care providers regarding the sexual health, rights and services to be made available for adolescents.

During the year our focus shall also be on the critical care for mother. This shall be achieved by ensuring periodic visual skill drills on the management of pregnancy and labour complications. This would help in improving mother and child health by lowering maternal and neonatal morbidity and mortality.

A third of women's life is spent postmenopausal, during the age prone to cancers. To promote health and provide quality care for this age group, we shall be supporting individuals and institutions, in organizing sessions, and giving technical knowledge on conducting screening programme in this age group.

We wish to work together towards a common vision and goal as when everyone together moves forward then success takes care of itself. I look forward to your feedbacks and encouragement.

COMING TOGETHER IS A BEGINING
KEEPING TOGETHER IS PROGRESS
WORKING TOGETHER IS SUCCESS..... Henry Ford

ALONE WE CAN DO SO LITTLE,
TOGETHER WE CAN DO SO MUCH..... Helen Keller.

Dr Pratima Mittal
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From the Secretary's Desk



Greetings to all!

At the outset, I thank our dynamic AOGD president who has entrusted me to work in this capacity. It will be my continuous and dedicated effort to bring forth the best to achieve our goal of this year “*Promote health, Protect rights, Provide quality services*”.

Protecting women rights is a burning issue world wide as with the rise of crime against women, its desperate need is being realised. The arena of providing quality services has always been an enigma as sometimes the crippled infrastructure may not be holding us back as much as its injudicious use. I hope with our meticulous efforts we will be able achieve these milestones. As this is a team work, I invite active participation from all our AOGD members. I would be glad to receive suggestions which would enrich us in every way. Dr Urvashi with her team and our other predecessors had started a very good practice of what to do in various obstetric drills. We have given it a new shape in video form with emphasis on how to do them.

The first monthly clinical meeting of AOGD Team Safdarjung Hospital was held on 24th April. The response was overwhelming and very encouraging. I am sure that all meetings in the coming months will also be well attended, bright and lively!

I hope that in the coming year various skill sessions and academic activities will revamp our clinical practices, make them ethically correct and dedicate us to the service of our procreator. We intend to treat you with an academic bonanza during our term 2015-16! The Almighty bless us all and guide us to the right path in our endeavours as Team AOGD 2015-16.

Dr Achla Batra

Hon. Secretary, AOGD
achla_batra@yahoo.com

Annual AOGD Conference

Block your dates for Annual AOGD Conference on 31st October - 1st November, 2015 at India Habitat Centre

Attention AOGD Members

- Members who have not received AOGD notifications on their email should update their email ID at official AOGD ID- agodsjh2015@gmail.com
- Please note annual membership entitles you to FOGSI membership for the calendar year January to December, irrespective of the month of AOGD registration.

AOGD Monthly Clinical Meeting

Next AOGD Monthly Clinical Meeting will be on Friday, 29th May, 2015 in Seminar Room, 3rd Floor, DDU Hospital Janakpuri, New Delhi. All members are cordially invited.

From the Editor's Pen



Dear Friends,

Warm wishes from the Editorial Team of AOGD 2015-16. With all humility we embark on this challenging but exciting journey for the next 12 months.

We have planned 11 dedicated issues of the AOGD Bulletin. We begin our nascent innings with an issue on "Adolescent Health." It was deemed all the more befitting to debut with this issue, as Safdarjung Hospital has been a pioneer in providing holistic health care to the adolescent population and can boast of national trainers in this field namely, Dr Pratima Mittal, Dr A.K Jain, Dr K.C Aggarwal and Dr Rajesh Rastogi.

The articles included in this issue, cover a vast ambit, keeping in mind this year's Motto – '*Promote health, protect rights and provide quality services for mother and child*'. Contemporary topics of great clinical interest, such as controversies in the management of adolescent PCOS, an overview of menstrual disorders, reproductive tract infections in adolescents and premarital counselling have been included. The needs of an adolescent have also been discussed vividly along with dwelling on the important aspect of nutritional needs of this vulnerable population. Keeping the mental health issues in mind, the clinical picture of adolescent depression, which is alarmingly increasing, has been effectively summarized. For the clinicians keen on providing 'Adolescent Friendly Health Services' the FOGSI guidelines for the same have been described.. Last but not the least, the Government of India's latest programme for adolescents – 'RKSK' has also been elucidated.

Besides the regular sections of the bulletin, we have also introduced a new feature this time – 'Meet the Luminary'. It was felt that our rapidly growing young community needs to know about the distinguished gynaecologists of Delhi. We have started with the patrons of our Association who have served our society for decades with their indomitable zeal and dedication and this month's issue features our dear Dr S.N Mukherjee. We have also included a Brain Teaser column to infuse enthusiasm into our inquisitive readers. Your suggestions for the improvement of the bulletin and your contributions are highly valuable to us. We look forward to hearing from you.

With this, on behalf of the Editorial team, I would like to wish happy reading to all of you.

"A good head and good heart are always a formidable combination. But when you add to that a literate tongue or pen, then you have something very special." - Nelson Mandela

Dr Jyotsna Suri

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Addressing the Needs of the Adolescent

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Adolescence (10-19 years) is a phase of transition from childhood to adulthood. It is characterized by accelerated physical growth and sexual maturation along with psychological, emotional, cognitive and social changes.

Why focus on adolescents?

Adolescents constitute about one fifth (21.4% or 243 millions) of India's population. They are future building blocks of our nation. Many adolescents face challenges to their healthy development into adulthood due to variety of factors like poverty, lack of information, unfavorable social norms, education or vocational training, expectation from early marriage, child bearing & forceful parenting with social discrimination.

The alarming rise in juvenile crimes like thefts, kidnapping, violence, murder, sexual harassment, rapes, accidental injuries (Road traffic accidents/violence) and drug abuse maybe due to these factors which have not been addressed to.

Needs of adolescents

Although adolescents are healthy i.e. have less chance of infections and other diseases (Non-communicable diseases) as compared to children and old people but, accelerated growth and rapid psychological and emotional changes causes considerable health issues which generally go un-recognized and are therefore not addressed properly.

Adolescents constitute a diversified group- school vs. college going, married vs. unmarried, educated vs. uneducated, rural vs. urban, different cast, religion, localities and age group. Therefore the needs of adolescents are also different. But broadly important needs of adolescents are:

- 1. Body image issues** - Rapid change in the bodies frequently make them compare with one another and may result in some psychological problems.
- 2. Nutrition** - Growth spurt requires extra and balanced nutrition. Due to gender discrimination, girls are affected more by malnutrition and anemia which later have adverse affects on pregnancy and to newborn. According to National Family Health Survey 3¹ (NFHS-3) 56% of girls and 30% of boys in 15-19 yrs of age are anemic.

- 3. Sexual & reproductive health** - A youth study (2006-2007) suggest that adolescents have limited awareness of majority of sexual and reproductive matters. Only 15% of young men & women in 15-24 years age group are reported to receive sex education in school or some special programme by Government or NGO.

The contraception knowledge is quite high in adolescents but usage is very low, around 47% girls get married before 18 years of age and then become pregnant. Teenage pregnancy has its own complications to mother as well as child, with maternal mortality of 9%. Pregnancy in unmarried girl leads to illegal abortion and its complications. Although abortion is legal in India, about 4 million women resort to illegal abortion/ year. Awareness about STI and HIV is also a concern. As per NFHS-3, awareness regarding STI in 15-24 years, is limited to 19% in boys and 15 % in girls.

- 4. Prevention of non-communicable diseases (NCD)** - According to WHO, NCD country profile 2011, NCD are estimated to account for 53% of all deaths in India. The main preventable risk factors for NCD during this period were tobacco & alcohol consumption, poor dietary habits, sedentary life style and stress.
- 5. Mental health** - The problem of aggression, violence and other mental health issues including drug abuse.

Addressing these needs

To address the adolescents issues, one need to work together with parents, teachers, community, religious leaders and medical professionals.

Parental approach

For this, parents themselves should be well informed and should not hesitate to talk to their children. They should listen to their concerns regarding sexual & reproductive health and provide relevant information, not dismissing the query as childish or improper. They should also encourage adolescents to adopt healthy life style and behavior. Parents also need to adopt responsible sexual behavior and healthy life style themselves to set an example.

The importance of "not discriminating girl child" cannot be undermined and sons should be taught to behave properly with girls.

Educators approach

Sex education should be an integral part of school curriculum. Appropriate information regarding reproduction and sexual health should be given in the class. Generally it is seen that chapter on “Human Reproduction” is skipped and teacher asks students to read it at home. It is good idea to train at least 2 teachers (one male and one female) on adolescents’ issues and students can approach them whenever need arises. They should also be responsible to provide information in special classes.

Efforts by community and religious leaders

Organizing special programs or camps in school or other areas to make the community aware regarding needs of adolescents & impart information on sexual health, stress relief or other issues. At the same time, one should condemn double standards like “accepting boy’s sexual activity and punishing girls for the act”

Role of medical professionals

Medical professionals play key role in addressing to adolescent’s needs. They possess the skills required to diagnose and treat medical problems and also counseling skills. What they require is sensitization towards adolescent’s issues. Adolescents tend to seek help of pediatricians for their medical problem but if there is any sexual concern in girl child, they visit gynecologist. Therefore, if pediatrician and gynecologist form a team along with psychiatrist, most problems of adolescents can be dealt with. Such a dedicated team is lacking in most hospitals but even if such facility is available, it is not utilized by adolescents due to:

1. Ignorance or lack of information regarding health risk and services available.
2. Concern over privacy and confidentiality.
3. Judgmental attitude of service provider
4. Timings may not be suitable/ convenient to adolescents.
5. Adolescents feel shy specially to talk about their sexual issues.

FOGSI has issued guidelines for practitioners to start an Adolescent/ Teen clinic (Refer- “Setting up adolescent friendly health centers: FOGSI guidelines”)

Government initiative- National Adolescent Health Strategy

The approach proposed in the strategy is based on continuum of care for adolescent health & development through provision of information and services at community level with referral linkages through 3 tier public health system. It proposes a convergent model of service delivery which will actively engage adolescents and first level service provider like teachers in school, ASHA & ANMs in the community, AanganWadi Worker

under the ICDS and Youth volunteers of the civil society to secure and strengthen mechanisms for access to health services.

To implement the strategy, which incorporates a combination of prevention, health promotion and healthy development, seven critical components are identified as 7 C’s.

1. *Coverage*- Universal coverage of all adolescents (10-19 years)
2. *Content*- After situational analysis of adolescent’s health and development following areas are incorporated - nutrition, sexual and reproductive health, mental health, preventing injuries and violence (including gender based violence), substance misuses and NCD.
3. *Communities*- Mainstay of this approach are peer educators/ mentors, selected and trained by teachers in institutional setting, ASHAs and AWWs in community based settings. They provide services through existing platforms like Anganwadi Centres (AWC’s). Sabla Kishori Smooh, teen clubs and when required, make referral to Adolescent Friendly health clinics (AFHC).
4. *Clinics*- AFHC are dedicated spaces for adolescents in existing health system with trained staff sensitized with adolescent’s Health issues. For capacity building, a programme to enhance skill of services providers on adolescents health issues, MOH&FW has launched Rashtriya Kishore Swasthya Karyakaram (RKSK)^{2,3}.
5. *Counseling*- counseling of not only adolescents but also influencers, care givers and families who act as gate keepers.
6. *Communication*
7. *Convergence*- strategic partnerships with other allied ministries, departments and other stake holders.

Take home message

Adolescents (10-19 years) are a diversified group with special needs. A team approach by parents, teachers, community leaders and health care providers along with specially designed programs from MOH & FW, Governments of India will go a long way to help adolescents grow safely into a mature and responsible adult.

References:

1. National Family Health Survey- 3, Ministry of Health & Family Welfare 2005-06
2. Rashtriya Kishore Swasthya Karyakaram, MOH & FW, Government of India www.nhp.gov.in/health.../
3. Training module for capacity Building of medical officers on RKSK, MOHFW, GOI.

Setting up Adolescent Friendly Health Centers: FOGSI Guidelines

Compiled by Rekha Bharti¹, Anita Kumar², Neha Rani³

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Responding to the unique needs of adolescents, the Ministry of Health and Family Welfare, Government of India has developed National Standards for the proposed Adolescent Friendly Health Services (AFHS) under the RCH-II ARSH strategy. In line with these national standards, Adolescent Health Committee of FOGSI recommends the following specifications and guidelines for organizing Adolescent Friendly Health Centres in the clinics/ nursing homes and hospitals of their members:

Reorganize existing clinic space

- Allocate convenient time slot when you can offer longer interaction time and dedicated attention to them. You could choose time for them at the beginning or end of the usual OPD session.
- If possible, allocate separate working area for adolescent clients when adolescent will have exclusive access to the services.
- Ensure that privacy (audio and visual) and confidentiality are maintained all the time during the consultation and subsequently as well.
- Ensure that the premises are clean; lighting and ventilation adequate; drinking water available; and the toilets are functional and clean.
- Decorate (colour scheme, posters etc.) the adolescent clinic area in confirmation with trends currently prevalent among adolescents.
- Prepare and maintain in good condition a sign board displaying the timings of the clinic, services provided, and fee structure.
- Ensure that the necessary equipments (Weight and Height equipment, BP apparatus, orchidometer etc.) required to provide services are always available.
- Ensure that informational and educational pamphlets are displayed and made available to adolescents and youth to take away. Adolescent Health Committee FOGSI has developed some prototypes that can be accessed from the website.

Decide service package

Depending on your capacity, interest and problems that

are prevalent in your area, decide a package of services that would be provided in your clinic and through referral services.

Develop standard clinic procedures

(Adolescent Job Aids. A handy desk reference tool for primary level health workers is available at http://www.who.int/maternal_child_adolescent/documents/9789241599962/en/)

- Develop clear procedure on how the client will be received and by whom.
- Registration procedure for the client should be simple, quick and follow privacy.
- Ensure that anonymous interview and treatment is possible.
- Develop and maintain standard history taking, physical examination protocols case records.
- Develop / adapt standard treatment protocols to manage common clinical conditions with which adolescents come to your clinic
- Develop referral procedures for laboratory, radiology work up and for clinical specialities.
- Ensure referral linkages for health services not provided by you.
- Develop an adolescent health card (personal health record and important health messages) that would remain with the client.

Strengthen skills of the team of health care providers (including yourself)

- Ensure adequate support staff with appropriate profile is in place and are present during the working hours of the Adolescent Clinic.
- Ensure that Doctors (including yourself) and support staff at your clinic have received orientation/training on the importance of non-judgmental, caring with strong inter-personal skills and supportive attitude towards adolescents and young clients.
- Ensure that colleagues/staff involved in peer educator training and school linked programmes, if any, are also appropriately trained (if applicable).

- Supervise your staff to ensure that they practice appropriate technical and interpersonal competencies and positive attitudes to provide adolescent health services effectively with sensitivity.
- Develop a network of adolescent friendly experts in other clinical specialities and counselling for ensuring referral services.

Outreach activities for demand generation and provide services beyond the clinic

- Identify community organizations in the catchment area to promote adolescent health and organize community camps for creating enabling social environment for promoting adolescent Health.
- Identify schools in your neighbourhood to interact with teachers and students periodically to promote adolescent health and inform about services available. Develop such an initiative with prior consultation and concurrence of the Principal, teachers and parents. You could choose to offer annual check up for students.
- Disseminate messages and communication materials on priority adolescent health issues in schools, youth clubs, youth centres, youth associations and different community organizations to support awareness

generation. Also inform about where and when they can access adolescent friendly health services.

Monitoring performance of the clinic

- Monitor the performance of your clinic regularly in terms of number of clients, their age and sex, types of problems they come to you with and treatment/referral offered. All the records must be kept confidential.
- Self-assessment of the quality of services at your clinic should be carried out periodically with the purpose of continuous improvement in quality.
- Periodically assess yourself to ensure that the standard guidelines provided here are being followed in your clinic. Such periodic self assessment would help you constantly improve the quality of services provided by you in your clinic.

Compiled from

1. Guidelines for Establishing Adolescent Friendly Health Centers- FOGSI. National Project of the Adolescent Health Committee FOGSI under the guidelines made in accordance with the Government of India guidelines (RCH II – ARSH Implementation Guide of Ministry of Health and Family Welfare) in consultation with WHO. 2011 <http://adolescenthealthindia.org/>

Adolescent Health Centers as per FOGSI Guidelines - AOGD is the first FOGSI society to kick start the project!



Menstrual Disorders in Adolescents: An overview

Jyotsna Suri¹, Deepali Dhingra² Zeba Khanam³

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Adolescence is a period of transition during which a girl undergoes a plethora of physical and psychological changes. Serious gynaecological pathology is rare in this age group, but menstrual disturbances are not uncommon and may add further disruption to this difficult phase for the adolescents and their families. Menstrual disorders such as excessive and irregular uterine bleeding, amenorrhoea and dysmenorrhoea are common in adolescents leading to significant morbidity in these young adults¹.

Abnormal uterine bleeding (AUB)

Abnormal uterine bleeding (AUB) refers to bleeding that is excessive or occurs outside the normal cyclic pattern. The most common cause of AUB in the first 19 months after menarche is anovulatory cycles due to immaturity of the hypothalamic-pituitary axis. Some other common causes may be related to stress, eating disorders, bleeding disorders and endocrine disorders like hypothyroidism & polycystic ovary syndrome (PCOS).

According to a study by World Health Organization, by the third postmenarchal year, 95% cycles fall in a predictable range of 21–45 days, with a flow lasting from 2 to 7 days and a mean menstrual blood loss of 35 ml (range 5–80 ml)².

Definition: Uterine bleeding outside of the parameters noted below is termed as AUB³⁻⁵.

- Duration greater than eight days; flow greater than 80 mL/cycle or subjective impression of heavier-than-normal flow (ie, more than six full pads or tampons per day).
- Occurs more frequently than every 24 days or less frequently than every 38 days
- Intermenstrual bleeding or postcoital spotting
- Absence of menses

Terminology: Various terms have evolved to describe patterns of abnormal uterine bleeding. In clinical practice, it is helpful to consider several major categories of AUB in adolescents³.

- Amenorrhea (absence of menses)
- Irregular bleeding (formerly “metrorrhagia”) which may be of reduced, normal, or excessive volume, and may occur at intervals of less than 24 days

(frequent menses, formerly “polymenorrhea”). The term infrequent menstruation (oligomenorrhoea) refers to menstrual cycles longer than 38 days or less than 2 cycles in a 90 day interval⁵. Most cases of oligomenorrhea occur in the first decade after menarche and the most common cause is polycystic ovarian syndrome (Refer- Controversies in PCOS).

- Heavy menstrual bleeding (excessive flow or menorrhagia).
- Acute bleeding due to anatomic defects or drugs (may originate from the cervix, vagina, or perineum)

The term dysfunctional uterine bleeding (DUB) classically has been used to describe excessive noncyclic endometrial bleeding unrelated to anatomical lesions of the uterus or to systemic disease. It may be more useful to think of dysfunctional uterine bleeding as anovulatory bleeding, since this is the primary cause. “Anovulatory uterine bleeding” is the term preferred by the American College of Obstetricians and Gynecologists to describe this pattern of bleeding. Anovulatory uterine bleeding is a diagnosis of exclusion.

Differential diagnosis: Causes of abnormal uterine bleeding during adolescence include

- Ovulatory dysfunction (immature H-P-O axis)
- Pregnancy related conditions
- Bleeding diathesis—commonest are thrombocytopenia, von Willebrand disease or leukemia
- Infections
- Stress (psychogenic, exercise induced)

Clinical evaluation: The evaluation of a patient presenting with irregular or heavy menstrual bleeding should begin with a careful medical history and examination, as it can reveal any potential underlying condition. It is important to obtain information about patient’s menstrual history, and particularly about age at menarche and length of cycles. The review of systems should specifically address other unusual or abnormal bleeding, psychosocial stressors, recent weight changes, eating and exercise habits, substance use, and signs of hyperandrogenism (acne, hirsutism). The patient should be asked, in private, about sexual activity, use of contraception, and history suggestive of sexually transmitted infections. Dysfunctional uterine bleeding

is a frequent gynecological problem in women of all ages and particularly common during adolescence and perimenopausal periods. It is a diagnosis of exclusion.

Treatment: The focus of treatment should primarily be the control of acute bleeding with haemostatics or hormonal medication and later the regulation of the menstrual cycle. Correction of anemia is one of the secondary goals in managing these patients. Adolescents presenting with mild AUB are reassured and hematinics started to correct anaemia. In those with troublesome and erratic bleeding patterns, regulation of normal pattern of menstrual cycle is required. The treatment of choice in older adolescents (after 16 years) is administration of low- dose oral contraceptives, as there is no further growth potential. If indicated between 12-16 years, OCPs should be used only for a short period to tide over the acute bleeding⁶. Cyclic oral progestins, are preferred in early perimenarchal years. Medroxy progesterone acetate, 10 mg is added in the last 10 days of cycle. Treatment with hormones should be continued for at least 3– 6 months⁷.

Amenorrhoea

Primary amenorrhea is the absence of menstruation by age 16 years in the presence of secondary sexual

characteristics or by age 14 years in the absence of secondary sexual characteristics. Primary amenorrhoea may be a result of congenital abnormalities in the development of ovaries, genital tract or external genitalia or a disturbance of the normal endocrinological events of puberty. About 40% of the cases are caused by endocrine disorders and rest by developmental abnormalities.

Secondary amenorrhea is the absence of menstruation for more than 6 months. PCOS and pregnancy may both present with secondary amenorrhea in early reproductive life. Moreover for adolescents with formerly regular cycles, it is defined as the absence of 3 or more subsequent menstrual periods.

The causes of amenorrhea, without including disorders of congenital sexual ambiguity were classified in 2008 by the Practice Committee of the ASRM as follows: (a) anatomic defects of the outflow tract, (b) primary hypogonadism, (c) hypothalamic causes, (d) pituitary causes, (e) other endocrine gland disorders, and (f) multifactorial causes⁸. The evaluation of amenorrhea includes a careful history and exam for signs of pubertal development and the presence of normal internal structures, follicle-stimulating hormone (FSH) level to determine whether the cause is central or ovarian, and further directed diagnostic testing based on history and

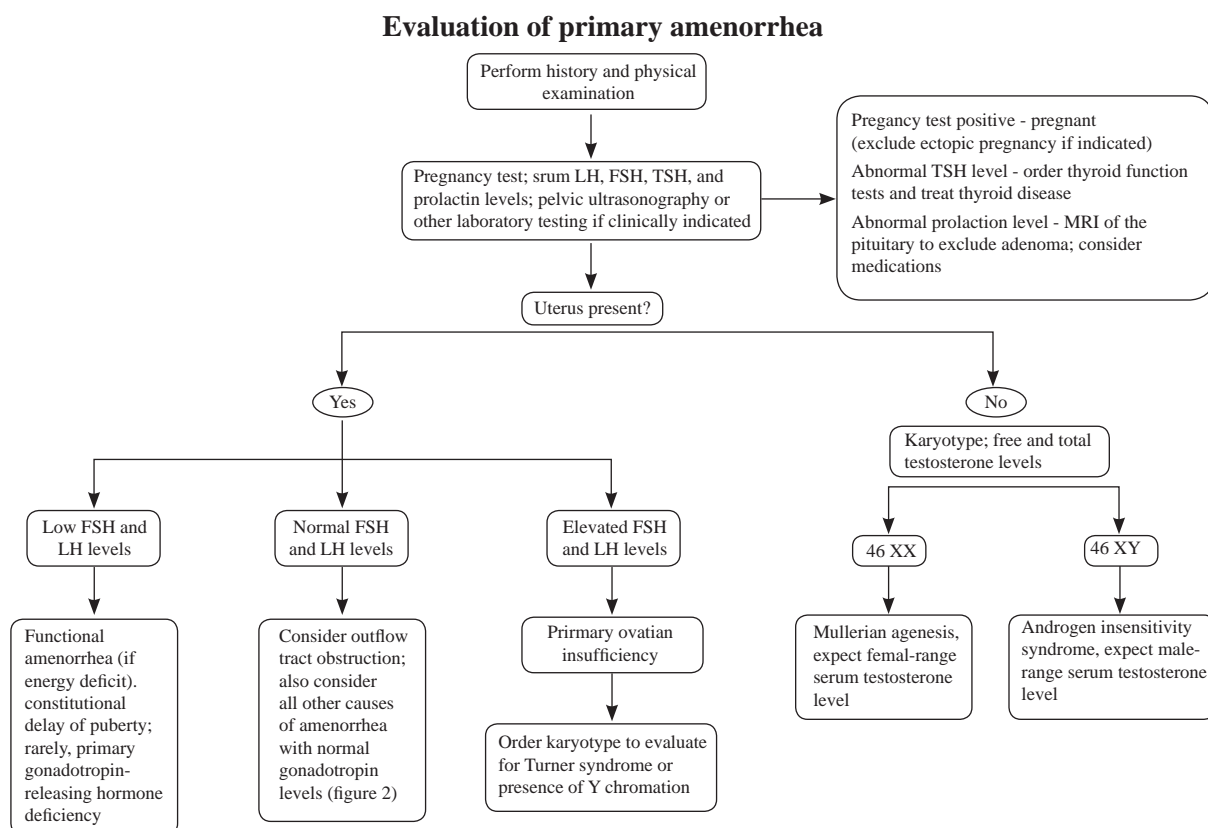


Fig.1: Evaluation of primary amenorrhea

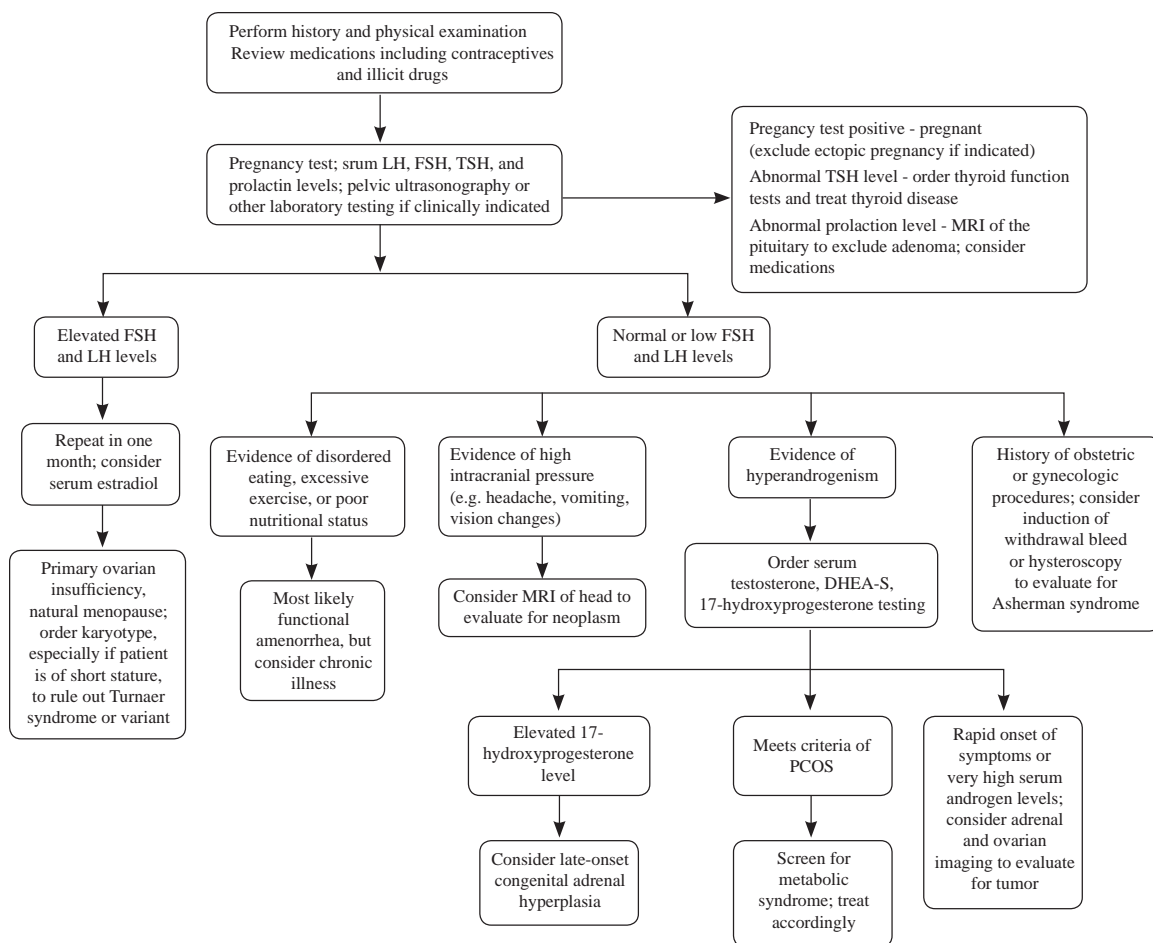


Fig. 2: Evaluation of secondary amenorrhoea

physical examination (Fig.1, Fig 2). The management depends on the etiologies of the problems and involves surgical correction, hormone replacement and other appropriate medical therapies.

Dysmenorrhea

Dysmenorrhea is the most common problem in adolescence and presents as painful menstruation. Dysmenorrhea is characterized as - primary in the absence of an underlying organic disease, and as secondary when there is evidence of pelvic pathology.

Dysmenorrhea is a common disorder that affects approximately 50% of menstruating women. The pain is thought to result from uterine contractions and ischemia, probably mediated by prostaglandins produced in secretory endometrium; therefore, primary dysmenorrhea is almost always associated with ovulatory cycles and usually appears within 1-2 years of menarche, when ovulatory cycles are established.

Secondary dysmenorrhea usually develops years after menarche and can occur with anovulatory cycles and this

may be associated with uterine and pelvic pathology such as intrauterine contraceptive device (IUCD), endometriosis, pelvic inflammatory disease (PID), cervical stenosis, a submucosal fibroid or an endometrial polyp.

NSAIDs are the most frequently used agents in the treatment of primary dysmenorrhea. Combined oral contraceptives have a beneficial effect on dysmenorrhea by inhibiting ovulation, leading to suppression of endometrial tissue growth and secondary to reduction of menstrual flow below normal levels. Secondary dysmenorrhoea is treated according to pathology. Since one of the most common cause of secondary dysmenorrhoea in adolescents is endometriosis, an active effort should be made to diagnose the condition to save the adolescent from its debilitating sequel. It should be suspected if NSAIDs fail to control the severity of the symptoms..

It can therefore be concluded that though menstrual disorders are common during adolescence, in the majority of the cases they are due to immaturity of the H-P-O axis. However a proper evaluation of the adolescent girl through a good clinical history and examination is essential to rule out any significant underlying pathology.

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Monthly Meeting Schedule for 2015-16

Month/Year	Institute
April, 2015	VMMC & Safdarjung Hospital
May, 2015	DDU Hospital
June, 2015	RML Hospital
July, 2015	Saket City Hospital
August, 2015	AIIMS
September, 2015	R & R Hospital
October, 2015	Sir Ganga Ram Hospital
November, 2015	MAMC & LNJP Hospital
December, 2015	Hindu Rao Hospital
January, 2016	LHMC & SSK Hospital
February, 2016	UCMS & GTB Hospital
March, 2016	ESI Hospital, Basaidarapur
April, 2016	Apollo Hospital

Controversies in Adolescent PCOS

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Polycystic Ovary Syndrome (PCOS) has of late, taken an epidemic form and is one of the most commonly encountered conditions in gynaecological practice, more so in the adolescents. In the absence of clear cut guidelines exclusively for adolescents, there are several queries in the minds of most of us regarding the diagnosis and treatment of this condition. This article aims to address the above mentioned issues, after reviewing the latest available literature on this topic.

Adolescent PCOS: A diagnostic conundrum

The diagnosis of PCOS in adolescence is very challenging, as the clinical features required for diagnosing this condition, are often normal physiological changes experienced during puberty. So where do we draw the line?

Adult versus adolescents: Is the diagnostic criteria the same?

The Rotterdam Criteria¹ (2003) which is most commonly used in the diagnosis of adult PCOS requires at least two of the three features -oligo-anovulation; clinical or biochemical evidence of hyperandrogenism and polycystic ovaries on ultrasound. This results in 4 different phenotypes² of PCOS in the adults.

- Phenotype 1 (classic PCOS) – Hyperandrogenism, oligo-anovulation and a polycystic ovary
- Phenotype 2 (hyperandrogenic anovulation) – Hyperandrogenism with oligo-anovulation
- Phenotype 3 (ovulatory PCOS) – Hyperandrogenism with a polycystic ovary (but without ovulatory dysfunction)
- Phenotype 4 (non-hyperandrogenic PCOS) – Oligo-anovulation and a polycystic ovary

The first and second phenotype conforms to the National Institute of Health³ (NIH 1990) diagnostic criteria of hyperandrogenic anovulation whereas phenotype 1-3 encompass the Androgen Excess- PCOS Society recommendations⁴ (2006). Phenotype 4 is very controversial due to its non-specificity, which is so broad that it even includes functional hypothalamic amenorrhea. The contribution of undetected ovarian hyperandrogenism to this phenotype is unclear. Hence it is seen that the diagnosis of PCOS even in adults is an

area of controversy.

In adolescents there is no overall agreement as to how to diagnose PCOS. Acne is common during the adolescent years, irrespective of PCOS, whereas hirsutism associated with PCOS develops over some years. Hyperandrogenemia may thus be a more consistent marker for PCOS during the teenage years.

In all young women, irregular menses are common in the years immediately after menarche. About 85% of menstrual cycles are anovulatory during the first post menarchal year. Even in the third year after menarche almost 50% cycles may be anovulatory. Hence a menstrual pattern that is abnormal for gynaecologic age (years since menarche) is more relevant in adolescents.

Presence of polycystic ovaries is seldom a useful diagnostic criterion for PCOS in adolescents because polycystic appearing ovaries are often a normal finding in adolescence. Moreover there is an absence of uniform guidelines required for ultrasonographic diagnosis (it has been suggested that in adolescents there should be at least 17 follicles or volume > 11.8 cc). However, the association of a polycystic ovary with symptomatic hyperandrogenism even in the absence of anovulatory symptoms (i.e., phenotype 3) may pose a *risk* for PCOS in an adolescent, so a careful follow up of these subjects is warranted.

Keeping all the above facts in mind, it has been suggested **that all the three Rotterdam criteria should be fulfilled** to make a diagnosis of PCOS in adolescents.⁵ Further oligomenorrhea or amenorrhea should be present for at least 2 years after menarche (or primary amenorrhea at age 16 yrs); the diagnosis of polycystic ovaries on ultrasound should include increased ovarian size (>10 cm³), and hyperandrogenemia rather than just signs of androgen excess should be documented.⁶

The ESHRE/ASRM-Sponsored 3rd PCOS Consensus Workshop Group⁷ (Amsterdam, 2010) made the following conclusions:

- Criteria for the diagnosis of PCOS in adolescents differ from those used for older women of reproductive age (level B).
- Groups at risk (e.g. obese, hirsute, irregular menses) should be identified, but physicians should be cautious of over diagnosing PCOS (level B).

- Individual PCOS manifestations in adolescents (e.g., obesity, hirsutism, irregular menses) (level B) should be treated.

Investigations required for diagnosis and management of PCOS

The investigations required for diagnosis of PCOS and to stratify the risk of developing metabolic syndrome are tabulated under essential investigations (Table 1), while the other battery of tests are at the clinician's discretion and are guided by the clinical picture of the patient.

Table 1

Essential investigations	Desirable investigations
• Serum total testosterone (day 2-3)	• Free testosterone
• Serum prolactin	• SHBG
• Serum TSH	• DHEAS
• 17 OH progesterone	• FSH/LH
• 2 hr 75 gm OGTT	• Fasting Insulin levels
• Lipid profile	• Vitamin D3
• Pelvic ultrasound (day 2-5)	

How do we document insulin resistance? Is it essential?

It is not essential to document IR for the diagnosis of PCOS but a basic 75 gm OGTT is mandatory as it has been seen that about 50 -60 % of obese teens and about 20% of normal weight girls with PCOS have IR and impaired glucose intolerance (IGT). It is desirable to do the tests for insulin resistance, to plan the management and counsel regarding further prognosis.

The gold standard for insulin resistance is the euglycaemic gold clamp test which is very time consuming and expensive and used mostly in research settings. Representative tests which can be used in office setting are

- 75 gm OGTT – to detect GI or impaired glucose tolerance
- Fasting glucose/fasting insulin with cut off < 4.5
- HOMA-IR: fasting insulin X fasting glucose divided by 405 with cut off >2.5 to 3.5 as per different laboratory standards and calibrations.

Treatment modalities: When, how and how long?

As per the third ESHRE- ASRM Consensus workshop the individual manifestations of PCOS, in adolescents should be treated⁷.

The clinical manifestations which warrant treatment are:

- Abnormal uterine bleeding (AUB): irregular bleeding or heavy menstrual bleeding
- Cutaneous hyperandrogenism: hirsutism which is distressing; severe persisting acne and temporal baldness
- Insulin resistance
- obesity

Lifestyle modification is the first-line treatment especially for the overweight and obese. The initial pharmacological treatment offered is combination oral contraceptive pills (COC), since these correct both menstrual abnormalities and hyperandrogenemia. If hirsutism is not controlled satisfactorily by cosmetic and OCP treatment, physical hair reduction methods and antiandrogen therapy are added. Metformin is suggested if abnormal glucose tolerance or lipid abnormalities of the metabolic syndrome cannot be normalized by weight loss. This approach is in agreement with Endocrine Society guidelines for the treatment of PCOS in adolescents⁸.

AUB

Abnormal uterine bleeding may manifest as irregular, infrequent cycles or as heavy menstrual bleeding (refer -“Menstrual disorders in adolescents.”)

The treatment of choice for this condition, are *the oral contraceptive pills*, as they regularize the cycles and improve the hyperandrogenic manifestations⁸.

The choices available are:

- OCP with standard progestin (Mala, Ovral): advocated for adolescents, with AUB alone or associated with hyperandrogenic features.
- OCP with drospirenone (Yamini, Dronis): preferred in obese girls with or without hirsutism, because of the unique antiandrogenic and antimineralocorticoid properties of drospirenone which minimizes weight gain and may in fact have a temporary weight losing effect.
- OCP with cyproterone acetate (Diane, Krimson); desogestrel (Novelon) which are antiandrogenic: suitable for girls with predominant hyperandrogenic features.

After few years (depending on clinical picture), the OCP can be withdrawn for few cycles to allow for recovery of suppression of pituitary-gonadal function and to ascertain whether the menstrual cyclicity has resumed.

Caution: In perimenarcheal girls with short stature who have open epiphyses and further potential for linear growth as determined by radiographic assessment of bone age, OCPs are contraindicated because OCPs contain growth-inhibitory amounts of estrogen.

Progestins are most suitable in:

- Irregular and infrequent cycles without hirsutism or acne.
- Menstrual irregularities with contra indications for estrogen containing OCPs.
- Menstrual irregularities in perimenarcheal girls with further growth potential.

Medroxy progesterone acetate (Deviry, Modus) 10 mg or micronized progesterone 100-200 mg at bed time can be prescribed for 10 days each month to facilitate monthly withdrawal bleeding and to prevent endometrial hyperplasia.

Progestin therapy in a six-week cycle instead of a monthly cycle has an added advantage that it can permit the detection of the emergence of normal menstrual cyclicity. The perimenarcheal girl who responds well to progestin therapy can be maintained on six-week cycles for several years, permitting the detection of spontaneous menses. Hence a six week cycle can be advocated in place of monthly cycle.

Hirsutism

OCPs along with any of the following additive therapy are advocated for 9-12 months. It is important to counsel the patient that the effect of COCs will not be apparent before at least 6 months of therapy.

Cosmetic treatment like waxing, bleaching, shaving and depilatory creams are safe options and cheaply available. Drawback may be skin irritation and need to frequently repeat the process.

Eflornithine hydrochloride cream (available in India as Eflora) can be used topically for the removal of unwanted facial hair in women. It inhibits hair growth and takes about six to eight weeks for clinical effect. It needs to be used indefinitely to prevent re-growth. It is safe and can be used as an adjunct with other modalities.

Laser therapy removes hair permanently by thermal destruction of the dermal papilla. The high cost and repeated sessions is its biggest limitation.

Electrolysis can remove hair permanently because it destroys the dermal papilla. It is a slow, expensive therapy that can be uncomfortable and occasionally causes scarring.

Anti androgens can be started if the above mentioned interventions do not bring the desired results in about 12 months. They should always be prescribed with an OCP, as they may cause menstrual irregularity and because of their potential teratogenic effect. There are no clear cut guidelines about the duration of treatment with antiandrogens.

The antiandrogen drugs available are:

- Spironolactone (Aldactone) is the drug of choice at a dose of 100 mg twice a day for 9-12 months followed by a maintenance dose of 50 mg twice a day.
- Cyproterone acetate (CPA) is a progestin which is combined in low doses of 2 mg with estradiol in some formulations (Diane, Krison). It can also be given in higher doses with any form of estrogen. Limiting factor is hepato-toxicity.
- Finasteride (Finast, Fincar) is another option, given in a dose of 5mg. May be less effective than spironolactone.
- Flutamide is rarely used because of risk of fatal hepatocellular toxicity.

Insulin resistance and obesity

The first line of management

Lifestyle modifications, including 30 minutes of exercise every day and dietary interventions are advocated. Lifestyle modification improves menstrual frequency, ovulation, and testosterone levels as well as improves weight and insulin levels though no improvement in hirsutism is seen. Lowering the glycemic index of the diet also benefits the insulin-resistance of adolescents with PCOS. It has been seen that weight loss in obese adolescents can induce regular ovulatory cycles in at least half of them.

Role of insulin sensitizers:

Metformin- Adolescents with PCOS and high levels of insulin resistance may benefit from adjunctive treatment to improve glucose metabolism, usually in conjunction with OCPs or other hormonal treatment for the PCOS. For this purpose, metformin is the first-line choice. Even though abnormal glucose tolerance is the only approved indication for metformin, it is also used as an adjunct to the management of obesity and insulin-resistant metabolic abnormalities. The *optimum dose is 1500-2000 mg per day* and is best tolerated as extended release twice daily schedule. *A minimum of 6 months treatment is required to improve the menstrual cyclicity and metabolic parameters*, which may be extended over longer period if required. Baseline metabolic panel should be done before starting metformin because of the rare but serious side effect of lactic acidosis. For the same reason it is contra-indicated in case of hepatic, renal or cardiac insufficiency and chronic alcoholism as it can cause lactic acidosis in these conditions.

Thiazolidinediones - Pioglitazone and rosiglitazone may induce the menstrual cyclicity. However they can lead to weight gain, heart failure in adults and hepatocellular toxicity. For this reason they are not advocated in the adolescents.

Table2: Management of adolescent according to phenotypic individual PCOS manifestations

Clinical phenotype with predominant symptom	First line management	First line pharmacological management	Second line management
Classic-Hyperandrogenic, oligo-anovulatory and polycystic ovaries	Normal BMI – regular exercise. Obese - diet modifications & exercise	Non obese: Low dose OCPs with CPA or desogestrel Obese: Low dose OCP with drospirenone. Add Metformin if impaired GTT, Type 2 DM, IR or obesity	If no relief of hyperandrogenic symptoms in 6-9 months add anti-androgen –spironolactone with OCP. Obesity: in morbidly obese BMI>30 sibutramine or orlistat
Hyperandrogenic and oligo-oligoanovulatory	--do--	--do--	--do--
Ovulatory with hyperandrogenism and polycystic ovaries	--do--	--do--	--do--
Non – hyperandrogenic with oligo-anovulation and polycystic ovaries	--do--	Progestins for 10 days every 4-6 weeks or low dose OCP (if contraception also desired) Add metformin if impaired GTT or DM	Low dose COC if cycle control not satisfactory with progestins

Myoionositol – is a naturally existing carbohydrate compound available as a diet supplement. It plays a role in insulin signalling thereby increasing insulin sensitivity. A dose of 2-4 gms for 3-6 months has been shown to improve ovulatory function in some studies.

Role of anti obesity drugs and bariatric surgery:

Sibutramine and orlistat can be considered in obese adolescents with co-morbidities, in whom life style measures fail. They can be given for upto 9 months to 1 year.

Bariatric surgery has led to improvement in hirsutism and androgen levels in most cases, as well as normalized menstrual cyclicity in adult PCOS cases. However its role in adolescents is limited to those with extremely high, life threatening BMI and those who can access these highly specialized services.

Conclusion

Diagnosis of PCOS in adolescents differs from that of adults. Groups at risk (e.g., obese, hirsute, irregular menses) should be identified, but physicians should be cautious of over diagnosing. Finally, individual PCOS manifestations in adolescents (e.g., obesity, hirsutism, and irregular menses) should be treated.

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“And now these three remain: faith, hope and love. But the greatest of these is love.”

- Anonymous, Holy Bible: King James Version

Had Premarital Counseling? Don't go to the altar without it!

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Marriage is a big commitment and most crucial decision in one's life. It poses a great challenge to the couple on the threshold of this beautiful yet demanding relationship. If the couple is made well aware of the major changes they are going to face after marriage, then it becomes easy for them to adjust and accept it. Premarital counseling is a therapy that prepares the couple for marriage, helps identifying weaknesses and helps a couple to have stable and satisfactory married life. It enables the couple to identify and discuss potential areas of conflict such as money, sex, children and family issues.

Components of premarital counseling are:

1. Compatibility with Partner
2. Responsible sexual behavior
3. Medical Aspect – Screening for risk; preventive health and chronic disease & medications.

Compatibility with partner

Premarriage preparation is based on the reality that it is important to strengthen one's relationship and prepare constructively for future challenges and conflicts that everyone will inevitably face at some point in their marriage. The typical complex marriage involves managing two careers, while rearing children and requires strong, well established abilities to communicate, resolve issues, maintain mutuality and set goals. The couple should be made aware that marriage is based on love and respect for one another, keeping the needs of other before the needs of self.

Responsible sexual behaviour

Couples often lack a basic knowledge of the reproductive biology and they should be made aware about freedom of sex without the fear of contracting sexually transmitted infections and unwanted pregnancy. They should jointly take decision pertaining to planning a family.

Marriage can expose couple to several diseases such as Sexually Transmitted Infections (STI) including HIV-AIDS. Most STIs/HIV-AIDS transmission in new couples and their offspring can be avoided by strict adherence to safe marriage practices through prenuptial medical counseling and testing of would-be couples. The World Health Organization also advocates that

individuals who are entering matrimony should undergo premarital counseling and screening to confirm or infirm the absence of specific diseases, including those transmitted sexually such as HIV.

It is common to get newly wedded couples coming for a medical termination. The couple is usually unaware of the availability and use of an effective contraception. The couple should be made aware of all the available contraceptive methods, facilitating them to choose a safe and effective method for future use. The method if chosen should be discussed and briefed prior to the marriage. The knowledge and development of attitude of the couple about contraception is important for accepting it.

Medical aspect

Screening for risk

It is desirable that the couples get medically screened for medical disorders before cohabitation. Some pathology labs now offer package of investigations for the couple –called “Kundali”- akin to matching the stars. Genetic and infectious diseases can be identified¹. Medical consultation is provided on the odds of transmitting these diseases to the other marriage partner or the children in the future, and to give options and alternatives before soon-to-be married with the aim of helping them plan for a healthy, sound family.

The dedicated clinics are largely lacking in our country and there is a felt need for such services particularly in the public sector, given that reproductive health education is not widely disseminated by schools, universities, or religious institution in India. However some countries like China and UAE have made it mandatory, by law, to undergo premarital counseling, screening and examination².

Preventive health

The preventive aspects which are important include nutrition especially regarding prevention of anaemia, maintenance of ideal weight, exercise and vaccination for sexually and transplacental transmitted diseases such as Rubella, Hepatitis B and HPV.

Chronic diseases and medications

Presence of chronic medical diseases like hypertension, diabetes, heart disease, epilepsy, thyroid disorders,

bronchial asthma, collagen vascular diseases etc. can negatively impact a future pregnancy and counseling regarding good control of the condition is important.

A review of the medications being taken and if they are potentially teratogenic should be an important consideration during a premarital counseling session. Drugs like ACE inhibitors, ARBs, statins and valproic acid may be replaced by a safer alternative before planned pregnancy.

Folic acid also referred to as the “engagement pill” should be advocated in all women at least three months before planning a pregnancy.

The **dedicated premarital clinics** should have active involvement of reproductive health specialists, gynecologists, and andrology specialists to provide counseling and testing. Informed consent is necessary, as well as assurance of confidentiality and privacy. Premarital programs are most successful when social, religious, ethnic and cultural factors are all addressed.

Check list for comprehensive premarital health package

Screening

- Screening of the couple through a detailed past and present medical and family history followed by examination.
- Screening to detect haemoglobinopathies, e.g. sickle cell anemia, thalassemia if suspected by family history or examination.
- Screening to identify ABO and Rh(D) blood type to detect possibility of blood incompatibility between would-be couple.
- Screening to detect infectious diseases like HIV, hepatitis B, C and syphilis as suggested by history and examination.
- Screening to detect sexually transmitted diseases (other than syphilis, HIV and HBV) such as gonorrhea and chlamydia as indicated by history.
- Screening to identify rubella immunity of females.
- Haemoglobin levels to identify anaemia.
- Screening for diabetes, hypertension etc. if directed by family history or examination.
- Screening for obesity/underweight

Information and counseling

- Imparting knowledge about reproductive biology and physiology of pregnancy.
- Information about different contraceptive options available for the couple.

- Counseling regarding safe sex practices and behavior.
- Counseling regarding ill effects of substance abuse, alcohol.
- Counseling about optimizing pre pregnancy weight.
- Counseling about healthy life style, nutritive diet and regular exercise.
- Information about effect of chronic diseases, genetic disorders and teratogenic drugs on future child bearing if relevant to the patient.

Interventions

- Confirmatory tests if any of the screening test is positive
- Vaccination of eligible females for rubella, HPV. Advice is given, prior to vaccination, to avoid pregnancy for one month.
- Vaccination of eligible partners for hepatitis B. Individuals, whose partner is HBsAg positive, are given a booster dose of hepatitis B vaccine if they have been vaccinated before, and a full vaccination series if they have not been vaccinated before.
- Couples with a family history of haemoglobinopathy or any other genetic disease are referred to genetic specialist in the region for further evaluation.
- Referral of persons with chronic disorders to respective specialists so as to ensure good control of disease prior to marriage and pregnancy.
- Folic acid supplementation before pregnancy.
- Iron supplementation in iron deficiency anaemia.
- Treatment of STIs detected during screening.
- Cessation of smoking, alcohol and drugs before pregnancy.
- Optimizing weight in obese.
- Replacement of teratogenic drugs like ACE inhibitors, ARBs, lithium, valproic acid, streptomycin, tetracycline, methotrexate etc. by safer alternatives few months before pregnancy

Solution focused premarital counseling

Sometimes, premarital screening often comes too late for couples to change their opinions about marriage based on their haemoglobin phenotype, because by this point they are already committed to their relationship. Furthermore, it may be ‘taboo’ for a woman to reject marriage for these reasons, and it may affect her social life, preventing her from ever getting married. One successful approach is ‘solution-focused’ premarital counseling based on a couple’s resources, helping them to develop a shared vision for the marriage. Background information about premarital counseling and solution-focused therapy

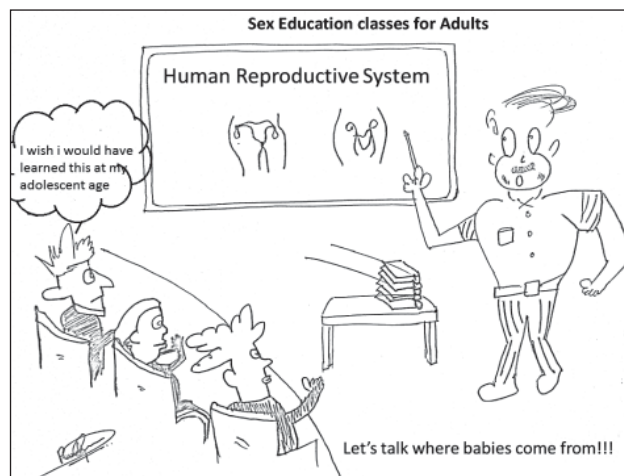
provide a framework in which intervention strategies in those confirmed with positive status for a disease can be developed.



To conclude, premarital counseling and screening is a very important intervention, which mentally and physically prepares a couple entering into matrimony and enables them to share a responsible and stable relationship.

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FORTHCOMING EVENTS

- **Eighteenth PG practical course and CME**, to be organized by the Department of Obstetrics and Gynaecology, Maulana Azad Medical College, New Delhi, will be held on **9th, 10th and 11th October, 2015 at MAMC auditorium**, Bahadur Shah Zafar Marg, New Delhi. For details please contact Dr Krishna Agarwal- drkrishna.agarwal@gmail.com, 9968604350
- **Sixth MICOG-MRCOG Part 1 examination** will now be conducted in **September 2015**. Last date for receiving the application is **June 1, 2015**. **Sixth Refresher Course for Sixth MICOG-MRCOG Part 1 examination, September 2015 exam** will be held in **July 20-22, 2015 at FOGSI Office, Mumbai between 9.00am to 6.00pm** under the able guidance of Dr Neelanjana Mukhopadhyay from RCOG. For details and form contact, ICOG Secretary at icogoffice@gmail.com.
- **Yuva FOGSI South Zone Conference 2015** is being held at **The Gateway Hotel, Calicut. (Taj Group) on 28th, 29th and 30th May, 2015** organized by CALICUT OBSTETRIC & GYNAECOLOGICAL SOCIETY Under The Aegis of FOGSI. Abstracts are invited for Oral & Poster presentations on FOGSI Theme 2015. Last date for abstract submission is 10th May 2015. Abstract for free paper may be mailed to: kchandramathy@ymail.com/ binduvk@gmail.com and copy to yuvafogsiszone@gmail.com. Abstract for poster be mailed to drmumtazp@gmail.com, copy to yuvafogsiszone@gmail.com. For details mail to yuvafogsiszone2015@gmail.com, Website: www.cogskerala.org
- **22nd Annual conference of NARCHI Delhi Branch on 22nd & 23rd August 2015 at Scope Complex Lodhi Road, Delhi. Theme topics:** 1. Medical Disorders in Pregnancy, 2. Quality Maternity Care, 3. Recent Advances in Operative Gynecology, 4. Miscellaneous. PG quiz on "Contraception". Last Date of Registration & Abstract Submission is **31st July, 2015**. For details contact website www.narchidelhi.org Contacts no. - 9868399724, 9868399730
- **Challenges in Vaginal Birth** – A hands on workshop on maternal/fetal simulator at LT1 (behind OPD), **Safdarjung Hospital**, on 14th May, 2015 at 1.00pm onwards. No registration fee. For further information & confirmation contact - 9971096019
- **'FENIX-2015' - Annual Conference of Delhi Gynaecological Endoscopists Society with theme Fertility and Beyond: Inception to Xcellence.** Department of Obstetrics and Gynaecology, AIIMS, New Delhi is organizing 'FENIX-2015', the Annual Conference of Delhi Gynaecological Endoscopists Society **from 28th to 30th August 2015**, at J L N Auditorium, AIIMS, New Delhi in collaboration with Gynae Endocrine Society of India (GESI). This event is being organized in collaboration with Endoscopy, Infertility & Urogynaecology Committees of FOGSI & AOGD under the aegis of Gynae Endocrine Society of India (GESI).
- **Next AOGD Monthly Clinical Meeting will be on Friday, 29th May, 2015 in Seminar Room, 3rd Floor, DDU Hospital Janakpuri, New Delhi. All members are cordially invited.**



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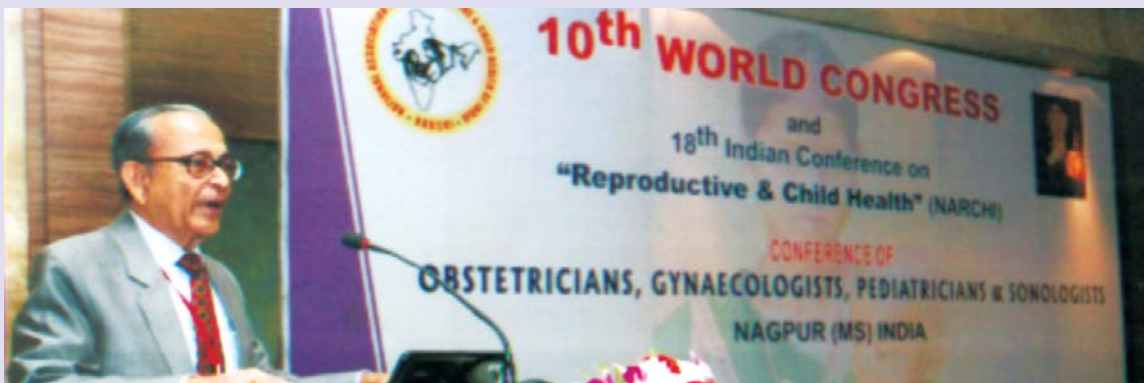
Meet the Luminary

Down the Memory Lane with..... Dr S N Mukherjee

It was with a sense of trepidation that we ventured to India International Centre for our appointment with Dr SN Mukherjee - the most respected and eminent figure of our Association. In no time we were at complete ease, listening to the pearls of wisdom from this perfect gentleman, alongside devouring delicious savouries. He spoke candidly and straight from his heart. On our way out, we realized that it had been one of the most memorable and inspiring day of our lives! Thank you Sir, for sharing the journey of your life with the AOGD members.

Dr Jyotsna Suri, Dr Rekha Bharti

Birthday 25 th April	Sun Sign Taurus	Place of birth Burdwan, WB	College R G Kar Medical College, Kolkata	
If not a gynaecologist, what would you have been? A surgeon		High point of your life Birth of daughter	Low point of your life Father’s death in 1960	Your role model Professor Subodh Mitra
What makes your day? Meeting students, colleagues, friends and people with smiling faces			What ruins your day? Avoidable arguments	
Your strategy in a crisis Be calm and cool, and have patience		One habit that you are proud of Punctuality		
How do you de-stress? By meeting friends & listening to “Rabindra Sangeet”			Any regrets? Leaving clinical & academic responsibilities to join administration	



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A relaxing moment: at the Glasgow CWG 2014



Passionate about sports at Lord's cricket ground

A book that has made a lasting impression

Professional book “Clinical Obstetrics” by Professor Ian Donald and among fiction novels “Chokher Bali” by Rabindranath Tagore

Your favourite pastime

In my younger days, I used to play number of sports and now, I enjoy watching Cricket, Football and Lawn Tennis matches.

Your professional journey

Started my carrier as lecturer at my alma mater, R G Kar medical college, Kolkata. Joined Central Health services in 1961 as teaching faculty and served in Pondicherry Medical College (JIPMER), Shimla Medical College, Himachal Pradesh, UCMS & Safdarjung Hospital and MAMC. Had a stint of WHO visiting Professorship at important oncology centres of 3 countries, USA, UK and Japan. Thereafter, joined as Deputy Commissioner of Family Planning to Government of India in 1978 and subsequently served as Director CGHS and Additional DG, Health Services; Superannuated from government service in 1986. After that worked as WHO/and UNFPA Consultant to Bangladesh and Bhutan for Family Planning activities and did some Consultant practice till 7 years back.

Event that made deep impact on your mind and motivated you to take up this profession

Death of one of my very close aunt within 7 days of childbirth and also I had seen many maternal deaths in villages. It was at that time when I thought of becoming a doctor.

What inspired you to become a gynaecologist

Dr N Basu Resident scholarship in Obgyn in 5th year gave me ample opportunity to attend Obgyn emergencies 24X7.

Any unfulfilled tasks?

wanted to initiate establishment of Gynae Oncology Centre, at MAMC. Unfortunately, that dream could not be fulfilled, although, as HOD Gynae at Safdarjung hospital and MAMC, used to conduct weekly Oncology clinic with colleagues from Radiology, Radiotherapy and Pathology.

Helpless moment of your early professional life

While working as Resident surgeon was once called by a house-surgeon for a collapsed patient; a multipara with normal vaginal delivery had collapsed after delivery of placenta, without PPH. On enquiry, learnt that placenta was expelled by crude Crede's manoeuvre that resulted in the death of the patient. I still remember the face of that woman, her husband and wailing children.

Your current state of mind

I am in a happy space.... Enjoying academic activities under AOGD and NARCHI, giving orations, helping colleagues whenever requested, and spending time with friends in either Gymkhana club, India Habitat Centre or India International Centre

A piece of advice you want to give to budding gynaecologist

Have your definite aim in life and try to achieve it by following 3 P's. “Passion, Patience and Perseverance”

Any other message

Best of luck to Safdarjung Hospital team to make this year of AOGD really memorable and successful.

Events Held

Scientific Events held under aegis of AOGD in March – April 2015

- CME on ‘Diagnosis & management of cervical intraepithelial neoplasia’ was held at Hamdard Institute of Medical Sciences and Research on 7th March, 2015.
- Urogynaecology workshop was held at AIIMS, on 14th March, 2015
- AICC RCOG hands on hysteroscopy, laparoscopy and vaginal surgery course was organized at Fortis Hospital, Vasant Kunj from 19th - 21st March, 2015
- ‘Infertility management for gynaecologists’ under aegis of Indian Fertility Society & Infertility Committee, AOGD, on 29th March, 2015
- AOGD Monthly Clinical Meeting was held in Safdarjung Hospital on 24th April, 2015.
- CME on Fibroids and Infertility was held at Hotel Africa Avenue on 24th April, 2015 by Delhi Gynaecological Forum (South) under aegis of AOGD.
- A CME on infertility was held on 26th April, 2015 under aegis of infertility committee FOGSI and AOGD
- The department of Obstetrics and Gynaecology, AIIMS, New Delhi had organized a CME “**Symposium on PCOS and Turners Syndrome**” on **26th April, 2015 at Jawaharlal Nehru Auditorium, AIIMS, New Delhi** under the aegis of Gynaecological Endoscopic Society of India (GESI) and Association of Obstetrics and Gynaecologists of Delhi (AOGD). The Symposium was attended by 200 delegates and 28 faculty.



Monthly Clinical Meeting at SJH



PCOS and Turner Syndrome Symposium at AIIMS



Infertility CME at Hotel Piccadily Janak Puri



CME on Fibroid and Infertility

Congratulations to Dr Alka Kriplani the pride of our Association



Dr Alka Kriplani at the Padmashree Award Ceremony with Honourable Prime Minister of India Sh. Narendra Modi and other Honourable Union Ministers.



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JJMI-MA-ET/1502048



***AOGD endoscopy and endometriosis subcommittees Hands-on courses
In Hysteroscopy Laparoscopy and Vaginal surgery & Video workshops on endometriosis
Accredited by AICC RCOG for continuing professional development & ICOG credit hours***

AOGD endoscopy and endometriosis subcommittees with the Gynaecare team of the department of Minimal and Natural Access Gynae & Gynae Cancer Surgery Fortis Vasant Kunj, New Delhi are organizing regular monthly three days hysteroscopy - laparoscopic - vaginal surgery courses and one day endometriosis video workshops at Fortis Flt Lt Rajan Dhall Hospital accredited by the AICC RCOG as a continuing professional development activity.

The three day courses will be in small groups of eight with an interactive format and will provide an opportunity for hands on-learning. One day video workshops on endometriosis will allow 20 delegates.

An assessment will be undertaken at the end of each course/workshop and a certificate of attendance given thereafter.

The Indian college of obstetricians and gynaecologists (ICOG) has allotted 8 credit hours for the video workshop on endometriosis and 21 credit hours for the endoscopy vaginal courses. Credit hours are also applied for to the Delhi Medical Association (DMA).

Organized by:

Gynaecare Team
Department of Minimal & Natural Access Gynae &
Gynae Cancer Surgery (MNAGCS)
Fortis Flt Lt Rajan Dhall Hospital
Vasant Kunj, New Delhi.
Sponsored by AOGD

For all the enquires please contact:

Course Master

Dr U P Jha (urvashipjhaclinic@gmail.com; Tel no 098110293100)

Course Coordinators:

Dr Neema Sharma (drneemasharma@yahoo.com; Tel no 09911057456)
Dr Ramandeep Kaur (dr.ramandeep@gmail.com; Tel no 09810605842)

Who all should attend?

Postgraduates, practicing gynecologists, gynae endoscopic surgeons

Those who want to start doing hystero-laparoscopies, vaginal surgeries and start/continue surgical treatment of endometriosis

Those who have started doing diagnostic procedures but want to progress to operative procedures

Those who are already doing some level 1 or 2 operative procedures and want to advance to a higher level & improve technique

Those already performing advanced procedures but would like to share experiences to further enhance their skills and get another experts' perspective/ approach

You could get ideas and improve your techniques from watching and assisting an experienced colleague do the same procedures

Registration details

Endoscopy & vaginal surgery course dates

Every 2nd Thursday, Friday & Saturday of each month
Registration fees Rs 5000

Endometriosis workshop dates

Every 3rd Saturday of each month
Registration fees Rs 1000

All Cheques to be made in favour of -

"Association of Obstetricians & Gynaecologists of Delhi"

Mailing Address - Gynaecology Co-ordinator, Gynaecare Team, MNAGCS Department, Basement OPD, Fortis Flt Lt Rajan Dhall Hospital, Sector B, Pocket 1, Aruna Asaf Ali Marg, Vasant Kunj, New Delhi, 110070

Video Workshops on Endometriosis

Programme 9:00am to 6:00pm

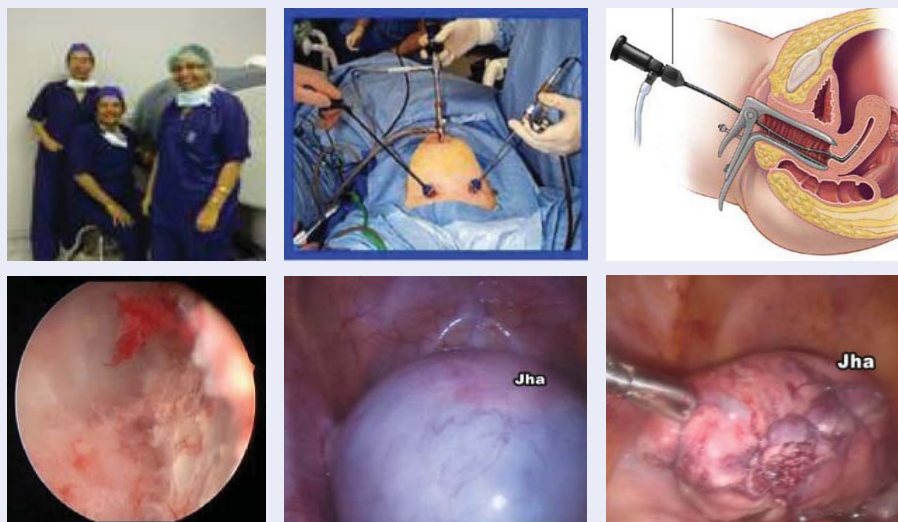
One day CME with interactive video sessions and lectures
Lap ovarian cystectomy (different sizes),
Adhesiolysis in endometriosis,
Grade 1 to 4 endometriosis,
Retroperitoneal dissection of ureters
Excision of recto vaginal nodule
Excision of scar endometriosis
Excision of vaginal endometriosis
cystoscopy and ureteric catheterisation

Workshop objectives

Participant will learn

1. Altered surgical anatomy of the pelvis
2. Tailoring the surgical management appropriate to the stage, site and severity of disease
3. Treatment of minimal & mild endometriosis scar endometriosis & vaginal endometriosis
4. When and how to perform cystoscopy with ureteric catheterisation
5. How to prevent diagnose and manage surgical complications in endometriosis patients
6. Cystectomy techniques and applications in patients with infertility and pelvis pain

Hands-on course of Hystero-Laparoscopy & Vaginal Surgery



At this course you will be able to perform & assist the hysteroscopic, laparoscopic and vaginal surgeries yourself under supervision, as appropriate to your current level of skill and complexity of cases. The courses will also include interactive lectures, discussions & analyses of surgical techniques. They will focus on prevention & management of complications. The cases may be interchanged and mingled on the 3 days depending on patient availability and need

Programme Day 1 Laparoscopy Day

8.45-9.15am Lecture Instrumentation
9.15-9.30am Energy sources
9.30-10.00am Complications, prevention and management
Live surgeries and video session subject to availability as below

1. Diagnostic Laparoscopy
2. Laparoscopic ovarian cystectomy
3. Laparoscopic myomectomy
4. Laparoscopic adhesiolysis
5. Laparoscopic oophorectomy
6. Laparoscopic hysterectomy
7. Laparoscopic radical surgeries & lymphadenectomies

Course objectives - Participants will learn hands-on:

1. Safe entry methods & creation of ports
2. Develop & Improve "hand-eye co-ordination" skills
3. The normal & altered anatomy in pelvic disease
4. The appropriate steps of the procedures conducted
5. To prevent, diagnose & manage complications
6. Trouble shooting issues
7. Assessment and feedback

Programme Day 2 Hysteroscopy Day

8.45-9.15am Lecture Instrumentation
9.15-9.30am Energy sources
9.30-10.00am Complications, prevention and management
Live surgeries and video session subject to availability as below

1. Diagnostic hysteroscopy
2. Hysteroscopic polypectomy
3. Hysteroscopic myomectomy
4. Hysteroscopic synechiolysis
5. Hysteroscopic tubal canulation
6. Hysteroscopic septum resection
7. Hysteroscopic lateral metroplasty

Course objectives - Participants will learn hands-on:

1. Correct uterine entry & orientation
2. Improve hand-eye intrauterine co-ordination
3. Appropriate handling of the hysteroscope, operative instruments and resectoscope
4. The steps of the hysteroscopic approach to the operating procedures
5. To prevent, diagnose and manage hysteroscopic complications
6. Hysteromat & equipment with troubleshooting issues
7. Assessment and feedback

Programme Day 3 Vaginal Surgery Day

8.45-9.15am Instrumentation & Positioning
9.15-9.30am Vaginal perspective of pelvic anatomy
9.30-10.00am Complications
Live surgeries and video session subject to availability as below

1. Non descent vaginal hysterectomy
2. Vaginal oophorectomy/cystectomy
3. Hysterectomy with PFR for prolapse
4. TVT-O
5. Transvaginal hydro-laparoscopy
6. Sacro – spinous fixation

Course objectives - Participants will learn hands-on:

1. surgical anatomy of the pelvis, pelvis floor and the perineum
2. The steps of the operative procedure
3. To prevent, diagnose and manage complications
4. Assessment and feedback



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- Accurate even in the presence of urine, semen, lubricants, infection, douching or detergents.^{2-6, 11-12}
- Most specific PROM test available.²⁻⁷

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Depression in Adolescents: A cause for concern

Rajesh Rastogi¹, A K Jain²

¹Professor & Head, Department of Psychiatry, ²Consultant, Department of Obs & Gynae VMMC & Safdarjung Hospital, New Delhi

Depression is a mood disorder characterized by persistent sadness. It may be recurrent or chronic in few cases. It causes significant impairment in overall functioning and disability. More commonly referred to as teenage depression, adolescent depression is not medically different from adult depression. However, symptoms in adolescent may manifest in different ways than they do in adults. This is due to the different social and developmental challenges.

How prevalent is depression in adolescents?

Major depressive disorder (MDD) is the most common mood disorder, occurring in up to 20% of adolescents. Girls are more likely than boys to experience depression. The risk for depression increases as a child gets older. According to the World Health Organization, major depressive disorder is the leading cause of disability among age 15 to 44.

What leads to depression in adolescents?

There is no single known cause of adolescent depression. It is a bio psychosocial illness. The neurotransmitters involved are serotonin, norepinephrine and dopamine. Life stressors or drug abuse may precipitate or worsen the illness. Peer pressure, changing hormone levels, developing bodies, awkward tendencies, and a host of other factors also play the role. Those with positive family history for depression have higher chances of getting the disorder.

When to suspect depression in adolescents: Danger signals

Depression in adolescents can manifest as irritable or angry mood, extreme sensitivity to criticism, unexplained aches & pains, sadness or hopelessness, tearfulness or frequent crying, withdrawal from friends and family, loss of interest in activities once found pleasurable, worsening school performance, changes in eating and sleeping habits, restlessness and agitation, feelings of worthlessness and guilt, lack of enthusiasm and motivation, fatigue or lack of energy, difficulty concentrating and in severe cases as thoughts of death or suicide.

DSM-5 Criteria¹ requires that symptoms should be present at least for 2-week period and represent a change from previous functioning.

Treatment

Just as depression has no single cause, there is no single treatment that can help everyone. It can take time to determine which treatment works best.

Psychotherapy: trying to address the adolescents' depressive cognitions and restructure them by CBT (cognitive behaviour therapy) or addressing interpersonal stresses in IPT (interpersonal therapy) or supportive psychotherapy. In mild cases it is often the treatment of choice.

Antidepressant medication: these correct the neurochemical disturbance said to be causative of depression. They usually improve features of depression in 4-6 weeks. Many classes of antidepressants are available *but* SSRIs (Specific Serotonin Reuptake inhibitors) are most commonly prescribed as first line treatment as they tend to have fewer side effects than other medications. Current SSRIs approved by the U.S. Food and Drug Administration and available in India include are citalopram, escitalopram, fluoxetine, fluvoxamine, paroxetine and sertraline. The most common side effects reported with SSRIs include: Sexual problems, nausea, diarrhoea and headache. Other new drugs include SNRIs (Serotonin Norepinephrine Reuptake Inhibitor) e.g. duloxetine, venlafaxine, bupropion and mirtazapine.

TCA's (Tricyclic Antidepressant) are used less frequently now due to the availability of other drugs with fewer side effects. Commonly prescribed TCA are imipramine, amitriptyline, nortriptyline etc. TCAs may produce more side effects than other antidepressants, including: blurred vision, constipation, dizziness, dry mouth, sexual dysfunction, sleepiness, weight gain.

Electro convulsive treatment: may be required in very severe, treatment resistant or high risk, suicidal cases.

Duration of treatment

Based on available longitudinal data and the natural history of major depression in children and adolescents, current recommendations include maintaining antidepressant treatment for 1 year in a depressed child who has achieved a good response, and to then discontinue the medication at a time of relatively low stress for a medication-free period. It can be given for a longer period in recurrent or more severe cases.

Conclusion

Depressive disorders have a very high prevalence in the community (20-25%). They are considered to have the highest rank in global burden of diseases (higher than cardiovascular disease or infections). There is a significant loss of productive life years in patients suffering from depression along with a risk of suicide and self harm. Around 15% of depressed patients attempt suicide. Thus early identification and proper treatment of depression is essential.

Reference

1. Diagnostic and Statistical Manual of Mental Disorders, 5th edition. The American Psychiatric Association, 2013.

Birth of an adolescent

*I was born to grow
My mom didn't tell me
From careless frolicking
To a somber teenager
The bulge on my chest
Red fluid down my thighs
The blues overtake me and
Leave me in despair
I was born to grow this way
My mom didn't tell me
I wished I never grew up*

- Dr. Sarita Singh
Specialist, O & G, Safdarjung Hospital



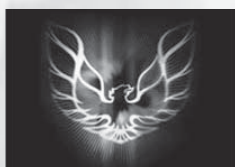
FENIX - 2015

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Sexually Transmitted Infections in Adolescents

Rekha Bharti¹, Jahanvi Meena², Neha Pruthi³

¹Assistant Professor, ^{2,3}Senior Resident

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Incidence and prevalence of sexually transmitted infections among adolescents is increasing in both developed and developing countries. Although the exact prevalence of STIs in Indian adolescents is not known, about 15 percent of adolescent women have one or more of the symptoms of reproductive tract infection (RTI) or sexually transmitted infection (STI). The main symptoms reported are low backache, pain in the lower abdomen, pain during intercourse and itching or irritation around the vulvar region. In the United States also, the prevalence rates of many sexually acquired infections are highest among adolescents. The reported rates of chlamydia and gonorrhea infection are highest among females aged 15–24 years. Human papillomavirus (HPV) infection, trichomoniasis, and herpes simplex virus (HSV) infections are also common in adolescents. High-risk sexual behaviours also place adolescents at risk of acquiring syphilis and HIV infection.

Why are adolescents more vulnerable to STIs?

As a consequence of unprotected sex with number of short term partners or with long term unfaithful, older partners or husbands, young women are at risk of contracting sexually transmitted infections. Furthermore, due to biological reasons, sexually active girls are at greater risk of acquiring infection than boys. Although, the main reason why adolescents are vulnerable to STIs is the lack of sex education on STI prevention, there is still reluctance to acknowledge and properly address issue of adolescent sexual activity despite widespread evidence of early sex, unwanted pregnancies and STIs in this group. The sex education provided in schools is insufficient and begins too late, and also many adolescents are not provided with the skills to protect themselves against the risk of infection. Adolescents in India suffer from lack of knowledge and empowerment to make informed sexual and reproductive health decisions results in rising incidence of sexually transmitted infections. They have lack of knowledge of symptoms and STI treatment is a low priority. They do not know where to go for the treatment, do not have the skills needed to express a sexual health problem, fear of examinations and fear of parents and other adults finding out.

Consequences of untreated STIs

Untreated STIs can cause pelvic inflammatory disease and anogenital and cervical cancers. In addition, the presence of other STIs increases the likelihood of both transmitting and acquiring HIV. Up to one-third of untreated cases of chlamydia or gonorrhea are complicated by PID. Scarring of the fallopian tubes from PID can lead to infertility, chronic pelvic pain, and increased rates of ectopic pregnancy. Perinatal transmission of gonorrhea and chlamydia can lead to conjunctivitis, infant pneumonia, and rarely, disseminated gonococcal infections in neonates. HSV infection in the newborn can be limited or present as encephalitis or disseminated disease. Perinatal HPV transmission can lead to cutaneous or laryngeal papillomas in infants or children. Congenital syphilis can lead to stillbirth, premature delivery, and a wide spectrum of clinical manifestations, including developmental delay and seizures.

Primary preventive modalities

Some STI are preventable and some (non viral STIs) are curable subject to appropriate antibiotic therapy. The recommendations for primary prevention of STIs, include education, counselling and vaccination against vaccine preventable STI. The vaccine preventable STIs include HPV and HBV infections. The HPV vaccine, either bivalent or quadrivalent (Cervarix or Gardasil), is recommended routinely for females aged 11 and 12 years and females aged 13–26 years who have not yet received all doses. The quadrivalent HPV vaccine (Gardasil) is recommended routinely for males aged 11 or 12 years, males aged 13–21 years who have not yet received all doses, or completed the vaccine series, and till age 26 for HIV-infected and men who have sex with men. The HBV vaccination series is recommended for all adolescents who have not previously received the vaccine. Information regarding HIV infection, testing, transmission and implication of infection should be imparted to all adolescents as part of health care.

Recommendations for screening

Adolescents should be screened confidentially about the initiation of sexual intercourse at each clinic visit. To optimize treatment and prevent sequelae of STIs in adolescents, screening and diagnosis must be tailored

to their unique needs. Screening for gonorrhea and Chlamydia is associated with fewer hospitalizations for PID and ectopic pregnancy. Centers for Disease Control and Prevention (CDC), recommends routine annual screening for *chlamydia* of all sexually active females younger than age 25 years. Routine screening for *gonorrhea* in all sexually active females at increased risk that include a previous gonorrhea infection, the presence of other STDs, new or multiple sex partners, inconsistent condom use, commercial sex work, and drug use. Rescreening should occur with the initiation of intercourse with a new partner. In patients who have tested positive for gonorrhea or chlamydia and have been treated, the CDC recommends repeat screening after 3 months because the rate of reinfection is high. NAATs are the most sensitive tests for urethral/endocervical/ vaginal swab or first catch urine specimen and are the recommended tests for *C. trachomatis* and *N. Gonorrhoea* detection. Screening for additional STIs such as syphilis or hepatitis should be based on symptoms and the presence of additional high-risk factors (prostitution, drug use, incarceration). It should be routine among certain populations with high rates of seropositivity. Routine screening for HSV is not indicated. Testing should be performed if genital ulcers or other mucocutaneous lesions are present. The CDC and the American College of Obstetricians and Gynecologists (ACOG) recommend glycoprotein G-type specific antibody testing in asymptomatic patients who report possible exposure, patients whose partners have history of genital herpes, and those who have histories of symptoms concerning for HSV infection. USPSTF, ACOG, and the American Cancer Society recommend that cervical cancer screening should begin at age 21 years; the recommendation is based on the low incidence

of cervical cancer and limited utility of screening for adolescents. Adolescents with STIs are more likely to have acquired HIV since HIV and other STIs share common modes of transmission, and STIs facilitate HIV transmission. Counseling and testing for HIV is offered to all adolescents with STIs.

Treatment

The treatment focuses on four principal outcomes of STI therapy for each individual disease: 1) microbiologic cure, 2) alleviation of signs and symptoms, 3) prevention of sequelae, and 4) prevention of transmission. Treating the partners is essential to prevent reinfection and further spread of the infection to others. In addition to treatment of current infection counseling regarding adherence with treatment, prevention of spread of the infection to others, risk reduction and education in the practice of safer sex behaviors, are critical elements in stemming the tide of STI transmission. Failure to comply with a full course of treatment can result in complications of the infection, transmission to partners, and development of drug-resistant strains. In case of incurable STIs (eg. HPV, Herpes, HIV) the practice of preventive behavior is the only hope of reducing the spread of infection.

The three approaches for treatment of STIs and RTIs include clinical, etiological and syndromic management approach. The availability of effective drugs is an essential component of STI/RTI services, which according to the World Health Organization (WHO) should offer a cure rate of at least 95%. In an attempt to fulfill this requirement and to accurately treat the STIs/RTIs, National AIDS Control Organization of

Table1

Kit No	Syndrome	Colour	Contents (quantity)	Dosage
Kit 1	Urethral Discharge, Ano-rectal Discharge, Cervical discharge,	Grey	Tab. Azithromycin 1 g (1) & Tab. Cefixime 400 mg (1)	Single dose, Tab Azithromycin to be taken empty stomach
Kit 2	Vaginal discharge	Green	Tab. Secnidazole 2 g (1) & Tab Fluconazole 150 mg (1)	Single dose
Kit 3 (Not Available)	Genital Ulcer Disease (without vesicles)	White	Inj. Benzathine penicillin 2.4 MU (1), Tab Azithromycin 1 g (1), Disposable syringe 10 ml with 21 gauge needle (1) & Sterile water 10 ml (1)	Single dose
Kit 4	Genital Ulcer Disease (without vesicles)	Blue	Tab. Doxycycline 100 mg (30) & Tab. Azithromycin 1 g (1)	Cap Doxy BD X 15d Tab Azithromycin Single dose
Kit 5	Genital Ulcer Disease (with vesicles)	Red	Tab. Acyclovir 400 mg (21)	TDS X 7 days
Kit 6	Lower Abdominal Pain Syndrome	Yellow	Tab. Cefixime 400 mg (1) Tab. Metronidazole 400 mg (28) & Cap. Doxycycline 100 mg (28)	Tab Cefixime single dose, Tab Metrogyl & Cap Doxy BD X 14 days
Kit 7	Inguinal Bubo Syndrome	Black	Tab. Doxycycline 100mg 42) & Tab. Azithromycin 1 g (1)	Cap Doxy BD X 21 days & Tab Azithro as single dose

India (NACO) has developed single-dose formulations and directly observed therapy of specific regimens with colour coded kits for syndromic management of these infections (Table 1). These drugs are supplied free of cost from State AIDS Control Societies (SACS).

Conclusion

Because STIs and other RTIs are a widespread global problem, it is important for health care providers to take advantage of all opportunities to communicate prevention messages to the adolescents and provide quality services for management of these infections.

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3. Dehne, Karl; Riedner, Gabriele. Sexually Transmitted Infections among adolescents. The need for adequate health services. WHO Library Cataloguing-in-Publication Data. http://www.who.int/maternal_child_adolescent/documents/9241562889/en/
4. Syndromic management of STIs/RTIs www.nacoonline.org.



"Moderation is the only rule of healthful life. This means moderation in all things wholesome."

- Herbert M Shelton.

"The pendulum of the mind oscillates between sense and nonsense, not between right and wrong."

- C.G. Jung

"Men marry women with the hope they will never change. Women marry men with the hope they will change. Invariably they are both disappointed."

- Albert Einstein

"The more hidden the knowledge of sex the more precarious the outcomes."

- Anonymous

Rashtriya Kishor Swasthaya Karyakaram

Sushma Dureja

Deputy Commissioner (Adolescent Health)

Ministry of Health & Family Welfare, Government of India



Adolescents aged 10–19 years constitute about 21% of India's population which in absolute numbers translates to 253 million- the highest number of adolescents ever found in one country alone followed by China's 200 million. Adolescents not only in India, but in most developing countries across the world, face a range of health challenges, including malnutrition and anaemia, lack of knowledge on sexual and reproductive health, substance misuse, communicable and non-communicable diseases, mental health concerns, and injuries and violence (including gender based violence)—all contributing to increased morbidity and mortality not only during adolescence but also later in their lives. Empirical evidence shows us that more than 33% of the disease burden and almost 60% of premature deaths among adults can be associated with behaviour or conditions that began or occurred during adolescence

The Ministry of Health and Family Welfare has adopted a continuum of care approach through its RMNCH+A strategy, in which +A denotes the addition of Adolescent Health. In order to address concerns and health needs of 253 million adolescent, India launched the Rashtriya Kishor Swasthaya Karyakram (RKSK) on 7th January 2014. RKSK reaches out all adolescents including male and female, rural and urban, married and unmarried, in and out-of-school adolescents. This programme envisions that all adolescents in India are able to realise their full potential by making informed and responsible decisions relating to their health and well-being.

Rashtriya Kishor Swasthaya Karyakram, is underpinned by evidence that adolescence is the most important stage of the life cycle for health interventions and that addressing adolescent health needs would obviate several health and development challenges including reproductive and maternal & child health challenges. For example, age at marriage, birth preparedness, appropriate spacing, teenage pregnancy and mortality and morbidity associated with it can be addressed only when we start to work with adolescents, both boys and girls, and their caregivers.

Rashtriya Kishor Swasthaya Karyakram is one of the first of its kind of initiative – which expands the scope of adolescent health programming in India - from being limited to sexual and reproductive health, it now includes in its ambit - nutrition, injuries and violence (including

gender based violence), non-communicable diseases, mental health and substance misuse.

The strength of the program is its health promotion approach. It is a paradigm shift from the existing clinic-based services to promotion and prevention and reaching adolescents in their own environment, such as in schools and communities. Key drivers of the program are community based interventions like peer educators and outreach by counsellors. In the coming years, under RKSK, we plan to enrol 36,00,000 peer educators across India. These young people will be supported by almost 900000 community based health workers called ASHAs to anchor this huge initiative and make it sustainable.

Adolescents often do not have the autonomy or the agency to make their own decision. RKSK takes cognisance of this and involves parents and community by creating a dedicated community based platform – the adolescent health day - for interaction with parent and care givers on adolescent issues. Communication for information and behaviour change i.e. Social and Behaviour Change Communication and Adolescent Friendly Health Clinics across levels of care are other key initiatives.

Interventions under RKSK include

1. Community based interventions:
 - Peer Education (PE)
 - Quarterly Adolescent Health Day (AHD)
 - Weekly Iron and Folic Acid Supplementation Programme (WIFS)
 - Menstrual Hygiene Scheme (MHS)
2. Facility based interventions
 - Strengthening of Adolescent Friendly Health Clinics (AFHC)
3. Convergence
 - *Within Health & Family Welfare* - FP, MH (including Village Health and Nutrition Day), Rashtriya Bal Swasthaya Karyakram, National AIDS Control Programme, National Tobacco Control Programme, National Mental Health Programme, NCDs and IEC
 - *With other departments/ schemes* – Woman and Child Development (ICDS, KSY, BSY,

SABLA), Human Resource Development (AEP, MDM), Youth Affairs and Sports (Adolescent Empowerment Scheme, National Service Scheme, NYKS, NPYA).

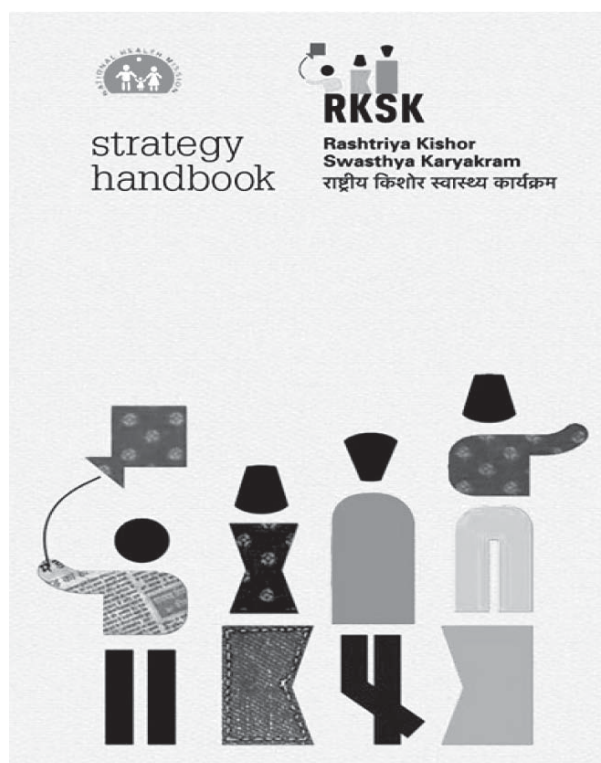
4. Social and Behaviour Change Communication with focus on Inter Personal Communication

RKSK is being rolled out across all states/ UTs in a phased manner. Besides GOI, State Governments, as well as many other stakeholders like Development partners, Civil Society, NGOs, research organisations and

professional bodies like FOGSI, IAP have an important role to play to facilitate the process of implementation. It is envisaged that the implementation of this programme will immensely boost the physical, mental and social health of the adolescent.

Further information

1. Rashtriya Kishore Swasthya Karyakaram, MOH & FW, Government of India www.nhp.gov.in/health.../



Immunization schedule recommended for Adolescents

BCG	All adolescent without a scar of BCG vaccination
Diphtheria, Pertussis, Tetanus	Tdap booster dose in previously immunized Three doses of Tdap in previously unimmunized or partially unimmunized
MMR	Single booster dose in all the adolescent Two doses at 4 weeks in previously unimmunized
Hepatitis B	Full course in previously unimmunized adolescent
Rubella	As part of MMR or 1 dose to girls at 12-13 yrs
HPV (optional)	Series of three injections over six month period at 10-12yrs (before initiation of sexual activity)
Vaccination against Typhoid, Varicella, Hepatitis A and HPV are not recommended for universal use. However they can be given as per individual's requirement Source: Consensus Recommendations on Immunization, 2008 (Indian Association of Pediatrics & Committee of Immunization IAP COI)	

Nutrition in Adolescents

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Introduction

Adolescence being the transitional period between childhood and adult life provides an opportunity, to correct some of the nutritional deficits that have already occurred and inculcate the right kind of eating habits which can form a strong base for a healthy, productive and reproductive life in future. The growth spurt of adolescence has been seen as a period of potential interest for catching up growth deficit of childhood. However, the evidence in this regard is still limited.¹

Energy and protein intake

Nutrition and physical growth are integrally related; optimal nutrition is a prerequisite for achieving full growth potential. Failure to consume an adequate diet at this time can result in delayed sexual maturation and can arrest or slow linear growth. Nutrition is also important during this time to help prevent adult diet-related chronic diseases, such as cardiovascular disease, cancer, and osteoporosis.

Energy needs of adolescents are influenced by activity level, basal metabolic rate, and increased requirements to support pubertal growth and development. Due to the wide variability in the timing of growth and maturation among adolescents, the calculation of energy needs based on height will provide a better estimate than total daily caloric recommendation (Table 1).

Recommended Caloric (Kcal) and Protein Intakes for Adolescents				
	Calorie (Kcal)		Protein (grams)	
Age (years)	Kcal/day	Kcal/cm*	Grams/day	Grams/cm
Females				
11-14	2,200	14.0	46	0.29
15-18	2,200	13.5	44	0.27
19-24	2,200	13.4	46	0.28
Males				
11-14	2,500	15.9	45	0.29
15-18	3,000	17.0	59	0.34
19-24	2,900	16.4	58	0.33

*2.54 cm = 1 in

Source: Data taken from Gong EJ, Heard FP. Diet, Nutrition and adolescence. In: Shils ME, Olson JA, Shike M, eds. Modern nutrition in health and disease. 8th Edition. Philadelphia, PA: Lea & Febiger, 1994; and 1989 Recommended Daily Allowances, 10th Edition of the RDAs, Food and Nutrition Board, Commission on Life Sciences. Washington, DC: National Academy Press; 1989.

Protein needs of adolescents are influenced by the amount of protein required for maintenance of existing lean body mass and accrual of additional lean body mass during the adolescent growth spurt. Protein requirements per unit of height are highest for females in the 11 to 14 year age group and for males in the 15 to 18 year age group, corresponding to the usual timing of peak height velocity. When protein intake is consistently inadequate, reduction in linear growth, delay in sexual maturation and reduced accumulation of lean body mass may be seen.

Nutritional issues of adolescents in low- and middle-income countries¹

- Undernutrition and associated deficiencies, often originating earlier in life;
- Iron deficiency anaemia and other micronutrient deficiencies;
- Obesity and associated cardiovascular disease risk markers;
- Teen pregnancy;
- Inadequate or unhealthy diets and lifestyles.

Undernutrition: It delays physical growth and maturation and also reduces work capacity. The stunting which occurs as a result of malnutrition causes an increased obstetric risk in future.

Anaemia and micronutrient deficiencies: Anaemia has been recognised as one of the main nutritional problems in adolescents. Heavy menstrual blood loss is just one cause among others which lead to iron deficiency in adolescents apart from malaria and hook worm infestation. Iron deficiency may alter the cognitive capacity in adolescents and also reduce the physical work capacity.

Vitamin A deficiency tends to decline with age; however it often extends into adolescence and early adulthood. It is now hypothesized that iron and vitamin A requirements are increased for growth in adolescence and these deficiencies may be a consequence of growth on marginal diets among adolescents. The relationship of serum retinol binding protein and retinol with puberty level suggests an important role of vitamin A in sexual maturation.

Iodine deficiency which has lasting effects on the physical, mental and reproductive health is a major obstacle to social and economic development. Iodine deficiency affects all age groups, but goitre primarily affects people aged 15-45 years, in particular women.

It is now recommended that routine supplementation with *vitamin D* (600 IU/day) and *Calcium* (1300 mg/day) should be done in the adolescents to provide for optimal growth and prevent osteoporosis².

Obesity: has become a global pandemic and is a public health issue of utmost importance. It compounds the risk of atherosclerosis and cardiovascular diseases such as hypertension. Overweight and obese adults are at increased risk for mortality and morbidity associated with many acute and chronic conditions, including gallbladder disease and gout.

Teen pregnancy: has a serious medical impact on the adolescent. Pre existing nutritional deficiencies and anaemia can take serious proportions leading to morbidity and mortality.

Interventions and Initiatives to improve adolescent nutrition³

Taking all of above issues into consideration Government of India has developed a comprehensive adolescent health strategy which proposes a set of interventions across different levels of care (health promotion, prevention, diagnosis, treatment and referral).

- Nutrition education sessions are being held using platforms such as Kishori Diwas, Anganwadi Centres and Nehru Yuva Kendra Sangthan. Nutritional counselling is done on quarterly adolescent health day.
- Iron + Initiative has been launched to include new age groups in the programme (adolescents, women in reproductive age group). A conscious effort has already been made to position the iron supplement for adolescents differently. The iron and folic acid (IFA) tablet for adolescents is coloured blue (*'Iron ki nili goli'*) to distinguish it from the red IFA tablet for pregnant and lactating women.
- Weekly iron and folic acid supplementation scheme (WIFS)-This scheme includes supervised administration of weekly iron and folic acid supplements of 100 mg elemental iron and 500mcg folic acid to adolescents. Other initiatives under this scheme are screening of target groups for moderate and severe anaemia and referral to an appropriate

health facility, bi-annual de-worming (Albendazole 400 mg), counselling for improving dietary intake and prevention from intestinal worm infestation.

- The life-skills-based adolescent education programme is implemented through schools and provides an important opportunity to inform and educate adolescents on relevant health issues. To promote a healthy lifestyle, schools are required to promote physical activity, at least 60 minutes per day for every working day.
- Preventive health check-ups and screening for disease, deficiency and disability-The School Health Programme addresses the need for preventive health check-ups amongst school going children and adolescents. Bi-annual health screening is undertaken for students (6-18 years age group), enrolled in government and government-aided schools for disease, nutritional deficiency and disability, with referrals and linkages to secondary and tertiary health facilities. The new approach in the implementation of the School Health Programme is to establish dedicated mobile health teams at block level. School-going children and adolescents in need of secondary and tertiary health care are entitled to free treatment through Rashtriya Swasthya Bima Yojana or State Health Insurance Scheme.

Nutritional interventions in adolescent girls may contribute to breaking the vicious cycle of intergenerational malnutrition and chronic disease. Improving the nutrition of the adolescent girl would lead to an improved pre pregnancy weight and body stores which will improve the outcome of future pregnancy and lactation. Improved iron and folate status would reduce the risk of anaemia and related complications in mother and child and also reduce the incidence of neural tube defects.

Hence it is seen that the period of adolescence, which is a phase of accelerated growth, requires to be nurtured with a balanced nutrition, to ensure that the child reaches his or her full growth potential and grows into a healthy and productive citizen of the nation.

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2. S Abrams. Dietary Guidelines for Calcium and Vitamin D: A New Era. *Pediatr* 2011;127: 566-568.
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Journal Scan

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Effect of human papillomavirus (HPV) vaccination on clinical indicators of sexual behaviour among adolescent girls: the Ontario Grade 8 HPV Vaccine Cohort Study

Smith LM, Kaufman JS, Strumpf EC, Lévesque LE. *CMAJ* 2015 Feb 3;187(2):E74-81. doi: 10.1503/cmaj.140900. Epub 2014 Dec 8.

Background: Suboptimal human papillomavirus (HPV) vaccine coverage in some jurisdictions is partly attributed to fears that vaccination may increase risky sexual behaviour. In this study authors assessed the effect of HPV vaccination on clinical indicators of sexual behaviour among adolescent girls in Ontario. **Methods:** Ontario's administrative health databases was used to identify a population-based cohort of girls in grade 8 in the 2 years before (2005/06 and 2006/07) and after (2007/08 and 2008/09) implementation of Ontario's grade 8 HPV vaccination program. For each girl, data on vaccine receipt in grades 8 and 9 and data on indicators of sexual behaviour (pregnancy and non-HPV-related sexually transmitted infections) in grades 10-12 was obtained. Using a quasi-experimental method known as regression discontinuity, the risk difference (RD) and relative risk (RR) attributable to vaccination and to program eligibility was estimated, for each outcome. **Results:** The cohort comprised 260 493 girls, of whom 131 781 were ineligible for the program. A total of 15 441 (5.9%) cases of pregnancy and sexually transmitted infection were identified and no evidence that vaccination increased the risk of this composite outcome was found: RD per 1000 girls -0.61 (95% confidence interval [CI] -10.71 to 9.49) and RR 0.96 (95% CI 0.81 to 1.14). Similarly, no discernible effect of program eligibility was found: RD per 1000 girls -0.25 (95% CI -4.35 to 3.85) and RR 0.99 (95% CI 0.93 to 1.06). The findings were similar when outcomes were assessed separately. **Conclusion:** There is strong evidence that HPV vaccination does not have any significant effect on clinical indicators of sexual behaviour among adolescent girls. These results suggested that concerns over increased promiscuity following HPV vaccination are unwarranted and should not deter from vaccinating at a young age.

Adolescent meat intake and breast cancer risk

Farvid MS, Cho E, Chen WY, Eliassen AH, Willett WC. *Int J Cancer*. 2015 Apr 15;136(8):1909-20. doi: 10.1002/ijc.29218. Epub 2014 Oct 3.

Background: The breast is particularly vulnerable to carcinogenic influences during adolescence due to rapid proliferation of mammary cells and lack of terminal differentiation. Authors investigated consumption of adolescent red meat and other protein sources in relation to breast cancer risk in the Nurses' Health Study II cohort. **Methods:** Prospective follow up of 44,231 women aged 35-52 years, who in 1998 completed a detailed questionnaire about diet during adolescent was done. Relative risks (RR) and 95% confidence intervals (95%CI) were estimated using Cox proportional hazard regression. They documented 1132 breast cancer cases during 13-year follow-up. In multivariable Cox regression models with major breast cancer risk factors adjustment, greater consumption of total red meat in adolescence was significantly associated with higher premenopausal breast cancer risk (highest vs. lowest quintiles, RR, 1.43; 95%CI, 1.05-1.94; P_{trend} =0.007), but not postmenopausal breast cancer. Adolescent intake of poultry was associated with lower risk of breast cancer overall (RR, 0.76;95%CI, 0.60-0.97; for each serving/day). Adolescent intakes of iron, heme iron, fish, eggs, legumes and nuts were not associated with breast cancer. Replacement of one serving/day of total red meat with one serving of combination of poultry, fish, legumes, and nuts was associated with a 15% lower risk of breast cancer overall (RR, 0.85; 95%CI, 0.74-0.96) and a 23% lower risk of premenopausal breast cancer (RR, 0.77; 95%CI, 0.64-0.92). **Conclusion:** Higher consumption of red meat during adolescence was associated with premenopausal breast cancer. Substituting other dietary protein sources for red meat in adolescent diet may decrease premenopausal breast cancer risk.

Physical child abuse potential in adolescent girls: associations with psychopathology, maltreatment, and attitudes toward child-bearing

Pajer KA, Gardner W, Lourie A, Chang CN, Wang W, Currie L. *Can J Psychiatry*. 2014 Feb;59(2):98-106.

Abstract- Objective: Adolescent mothers are at increased risk of mistreating their children. Intervening before they become pregnant would be an ideal primary prevention strategy. The goal of study was to determine whether psychopathology, exposure to maltreatment, preparedness for child-bearing, substance use disorders (SUDs), IQ, race, and socioeconomic status were associated with the potential for child abuse in nonpregnant adolescent girls. **Method:** The Child Abuse Potential Inventory (CAPI) was administered to 195 nonpregnant girls (aged 15 to 16 years; 54% African American) recruited from the community. Psychiatric diagnoses from a structured interview were used to

form 4 groups: conduct disorder (CD), internalizing disorders (INTs; that is, depressive disorder, anxiety disorder, or both), CD + INTs, or no disorder. Exposure to maltreatment was assessed with the Childhood Trauma Questionnaire, and the Childbearing Attitudes Questionnaire measured maternal readiness. **Results:** CAPI scores were positively correlated with all types of psychopathology, previous exposure to maltreatment, and negative attitudes toward child-bearing. IQ, SUDs, and demographic factors were not associated. Factors associated with child abuse potential interacted in complex ways, but the abuse potential of CD girls was high, regardless of other potentially protective factors. **Conclusions:** The study demonstrates that adolescent girls who have CD or INT are at higher risk of perpetrating physical child abuse when they have children. However, the core features of CD may put this group at a particularly high risk, even in the context of possible protective factors. Treatment providers should consider pre-pregnant counselling about healthy mothering behaviours to girls with CD.

Adolescence is just one big walking pimple.

- Carol Burnett

A large part of my adolescence was spent doing my very best to draw attention to myself.

- Rufus Sewell

By the time I turned 12, I was a 5-foot 10-inch social disaster. Towering over my friends was the bane of my adolescence.

- Sheri L. Dew

Even as kids reach adolescence, they need more than ever for us to watch over them. Adolescence is not about letting go. It's about hanging on during a very bumpy ride.

- Ron Taffel

Contributed by Dr Deepali Dhingra

Proceedings of Monthly AOGD Clinical Meeting held at VMMC and Safdarjung Hospital on 24th April, 2015

Compiled by Archana Misra¹, Harsha Gaikwad²

¹Assistant Professor, ²Associate Professor, Obs & Gynae, VMMC & Safdarjung Hospital

The theme of the meeting was: Diagnostic dilemmas in the diagnosis of ovarian tumors. 3 cases were presented

Case 1

Abdominopelvic mass - A diagnostic dilemma

Dr Neha Pruthi, Dr Taruni Sharma, Dr Pratima Mittal, Dr Jain, Dr Jyotsna Suri, Dr Anita, Dr Rekha Bharti, Dr Kavita

52 year old, P4L4 presented to Gynae OPD with chief complaints of pain lower abdomen for 4 months and lump in lower abdomen and increased frequency of micturition for 2 months. On abdominal examination there was a multilobulated firm mass corresponding to 16 wk size of uterus, lower limit of mass was not felt. On pelvic examination a multilobulated mass 10×10 cm anterior to uterus and in right fornix, which was mobile and non-tender. On basis of clinical findings, a diagnosis of malignant ovarian tumor was made. However, radiological investigations (USG & MRI) suggested that it was broad ligament fibroid. All tumor markers of patient were normal. Patient was prepared for laprotomy. Peroperatively there was a ovarian mass 15×10×10 cm multilobulated, grayish white, firm, solid on cut section. Histopathological examination revealed Ovarian Fibrothecoma.

Discussion:

Ovarian fibrothecomas are rare ovarian tumor (0.5%) and due to their solid nature they are often misdiagnosed as myomas. Similar discrepancy occurred in our case. Thus, radiological investigations help to make a diagnosis but should not be blindly followed.

Case 2

Peritoneal tuberculosis mimicking ovarian cancer

Dr Deepika, Dr Sunita Malik, Dr Kanika, Dr Saritha Shamsunder.

Women who present with ascites, adnexal masses and elevated CA125 levels are typically presumed to have advanced ovarian carcinoma. This must be differentiated

from abdominal tuberculosis which present with the same clinical picture. 37 years old multiparous lady presented with pain in abdomen and distension for 15 days. Her ultrasound examination revealed left sided ovarian cyst with ascites. Ca 125 level was 1105u/ml. Ascitic tap was done. AFB was absent on the smears from peritoneal fluid, ADA level was 15 IU/L. It was negative for malignant cells also. Her CECT was suggestive of ovarian carcinoma with peritoneal metastasis. Decision of open laparotomy and proceed was taken. Peroperatively all abdominal and pelvic organs including peritoneum were studded with reddish nodules and enlargement of left ovary was seen. Histopathological examination was suggestive of tubercular granulomas. However AFB culture was negative. Category 1 Antitubercular treatment started considering severe form of extrapulmonary tuberculosis and symptoms resolved.

Discussion:

In young woman with elevated CA-125 we should consider causes other than cancer, especially when serosal fluid is present. Ascitic fluid ADA through said to be the perfect marker for the diagnosis of pelvic tuberculosis, may be false negative. The case presented a diagnostic dilemma in what was probably an antibiotic responsive illness from carcinoma which would have resulted in aggressive surgical procedure.

Case 3

Cellular leiomyoma can mimic malignant tumor on frozen section: A diagnostic dilemma

Dr Preeti Bala, Dr Aarzo Malik, Dr Vijay Zutshi, Dr Renu Arora, Dr Sumitra Bachani, Dr Monika Gupta

A 50 year, female, P4L4, presented with chief complaints of abdominal pain associated with distension and difficulty in passing urine & stools. General physical and systemic examination was normal. There was an abdominopelvic mass of size 26 weeks, which was cystic, non tender and restricted in mobility. Her CA 125 was mildly elevated [155IU]. CECT revealed a large septated cystic lesion measuring 119x194x150 mm in the pelvic cavity with a cranial extension in to the upper abdomen and with mass effect on the urinary

bladder. Bilateral ovaries were not visualized separately. A provisional diagnosis of ovarian tumor was made and patient was taken up for exploratory laparotomy. Intraoperatively, uterus, bilateral tubes and ovaries were normal in morphology, a large cystic mass ~ 15x 10 x 6 cm was present at the level of UV fold attached to the uterus at the level of internal os on the left side. The mass was removed enblock and sent for frozen section. Possibility of a poorly differentiated malignant tumour

was suggested on frozen section so we proceeded with panhysterectomy. Final histopathology report showed cellular leiomyoma with focal atypia.

Discussion:

Huge broad ligament leiomyoma with cystic degeneration may present diagnostic difficulties and cellular leiomyoma may mimic malignant tumor on frozen section.

Adolescent Attributes

An Adolescent is...

They know how to make phone calls but just don't know how to end them.

A person who can't remember to walk the dog but never forgets a phone number.

A weight watcher who goes on a diet by giving up chocolate bars before breakfast.

A connoisseur of two kinds of fine music: Loud and Very Loud

Someone who can hear a song by Madonna played three blocks away but not his mother calling from the next room.

A whiz who can operate the latest computer without a lesson but can't make a bed.

A youngster who is well informed about anything he doesn't have to study.

An enthusiast who has the energy to ride a bike for miles, but is usually too tired to dry the dishes.

A young woman who loves the cat and tolerates her brother.

A person who is always late for dinner but always on time for a rock concert.

A romantic who never falls in love more than once a week.

An original thinker who is positive that her mother was never a teenager.

contributed by Dr Sumitra Bachani

Brain Teasers

Dear AOGD Members !

Hope you enjoyed reading the articles published in this first issue of our bulletin from team AOGD 2015-16 dedicated on 'Adolescent Health'. We have introduced a new section of Quiz which would have multiple choice questions with single best answers based on the information gathered after reading the bulletin articles. We are sure you'll find them a soft nut to crack once you have gone through the bulletin comprehensively! To make it even more interesting and inviting participation we have a provision for a lucky draw for the early bird members sending us the right answers within 7 days of receipt of the bulletin. The names of the members giving right answers and lucky draw winner will be published in our next issue.

So get going and exercise those grey cells! Good luck!

Find the single best answer for the following multiple choice Questions:

1. New approach in 'School Health Program' is:
 - a. Biannual screening for diseases, deficiencies and disabilities in govt. schools
 - b. Dedicated mobile health teams at block level.
 - c. Anxiety and depression counselling weekly
 - d. Supervised administration of "Iron kiNilliGoli"
2. 'Free Days' in relation to adolescent health is concerned with:
 - a. Anaemia prevention in targeted groups
 - b. Promoting menstrual hygiene
 - c. Adolescent information and counselling week
 - d. Fortified food items provided free of cost in schools
3. Adolescent Information and counselling centre has been established to provide service at :
 - a. Sub-district level daily
 - b. Sub-centre level daily
 - c. Peripheral Health Centre level weekly
 - d. District level weekly
4. For diagnosis of PCOS in adolescents which of the following is not true:
 - a. Two out of three Rotterdam criteria should be fulfilled
 - b. Oligomenorrhea or Amenorrhea present for at least 2 yrs after menarche
 - c. Ultrasound finding should include increased ovarian size ($>10\text{ cm}^3$)
 - d. Hyperandrogenemia rather than just signs of androgen excess documented.
5. According to the ESHRE/ASRM PCOS Consensus Workshop group which of the following is not a high risk group for developing PCOS in adolescents:
 - a. Obese
 - b. Hypertensive
 - c. Irregular Periods
 - d. Hirsute
6. Gold standard test for demonstrating Insulin resistance is:
 - a. Fasting glucose / Fasting Insulin
 - b. Euglycemic Gold Clamp test
 - c. HOMA-IR
 - d. 75 gm Oral Glucose Tolerance Test
7. Rashtriya Kishor Swasthya Karyakram (RKSK) caters to all of the following aspects of adolescent health except:
 - a. Nutrition
 - b. Communicable diseases
 - c. Injuries and Violence
 - d. Mental health & substance misuse
8. Facility based intervention for adolescent issues under RKSK is:
 - a. Weekly Iron and Folic Acid Supplementation Programme
 - b. Adolescent Friendly Health Clinics
 - c. Menstrual Hygiene Scheme
 - d. Quarterly Adolescent Health day
9. Under the government initiative of National Adolescent Health Strategy which of the following is not a critical component for its implementation
 - a. Coverage
 - b. Convenience
 - c. Communication
 - d. Convergence
10. According to CDC, for prevention of Sexually Transmitted Infections in adolescents, routine annual screening is recommended for Chlamydia in all sexually active females:
 - a. Younger than 21 years
 - b. Younger than 25 years
 - c. Older than 21 years
 - d. Older than 25 years

Courtesy:

Dr Monika Gupta

Assistant Professor

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- Journal of IFS M.D. Fellow A.R.T (Singapore)
- Imm. Past President- IFS, Founder Secretary- IFS
- Organizing Secretary LOC Federation of Obstetric and Gynaecological Societies -2016
- Formerly reader, UCMS & GTB Hospital, Delhi
- Ex-Professor, MMC
- Scientific Committee Member World Congress IFFS – 2016
- Member Educational Committee, IFFS
- Member International Scientific Exchange Committee – Federation of Obstetric and Gynaecological Societies.
- Editor In-chief, : Fertility Science & Research", official

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Pre- and post-operative therapy

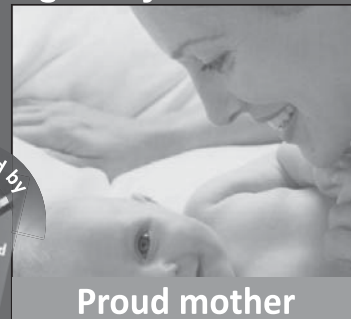
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