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AOGD BULLETIN

AOGD Theme 2017-18

'Optimizing Women's Health Through Enhanced Skills and Best Practices'

Issue:

Focus on Adolescents

AOGD SECRETARIAT

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President's Message

Dear Friends,

Warm Summer Greetings to all esteemed AOGD members! It is an honour and privilege to represent AOGD as its President and with it comes a huge responsibility of serving the largest society in the country, with almost 2500 members. We have with us a galaxy of esteemed patrons, advisers and executive council members to guide us with their wisdom and experience. In addition, Hon Secretary, office bearers and team UCMS and GTB Hospital have pledged to give their best and have promised to spend a whole year eating, breathing and sleeping AOGD! This year's theme **'Optimizing Women's Health through Enhanced Skills and Best Practices'** endeavours to equip all members with sufficient skills and updates to enable practice of the specialty confidently. We plan to conduct several skill workshops during the year details of which can be accessed on the website. In addition, AOGD CME's on evidence based practices are also envisaged. The Editorial team is putting together 12 thought provoking and incisive bulletins for the year with some fun elements and we hope all members find them valuable.

Planning for the much awaited Annual AOGD Conference is underway. Please save your dates for the 39th Annual Conference of AOGD to be held on the 18th & 19th November, 2017 at the India Habitat Centre. Pre-congress workshops on Gynecologic Oncology, Endoscopy, Critical Care Obstetrics, Infertility, Fetal Medicine, Intrapartum skills and more will be held on the 17th November. Strategizing for the events have begun and the first announcement with highlights will be made soon.

Another aspect which needs deliberations and thought is on how to tackle the menace of violence against doctors. We hope to address this issue on war footing and liaison with other organisations to end this disconcerting trend.

Looking forward to an exciting and fruitful year ahead!

Shalini Rajaram
President, AOGD (2017-18)

Vice President's Message

Dear Fellow AOGDians'

As I pen down few lines for the first bulletin of AOGD's newly elected office at UCMS & GTB Hospital, I am filled with a sense of pride, pleasure and responsibility. Pride; because it is an opportunity to serve AOGD, which is the ultimate professional body we all identify with. Pleasure; because we will be able to contribute to the welfare of women through the activities of the association, and responsibility; because we must endeavour to do considerable work in a short period of one year. Our predecessors have set a high benchmark for us and I am confident that under the dynamic leadership of our hon. President Dr Shalini Rajaram, team UCMS &GTBH will take the association to new heights. This year the focus of AOGD will be on enhancing skills, adopting best practices in our field and their real life application.

The inaugural issue deals with the concerns of adolescents who can easily be distressed with minor pathology. Careful and sympathetic assessment is crucial, and simple treatment remedies may be all that is required. However, complex and rare medical conditions can also occur and must not be missed. Sometime congenital disorders may present for the first time in adolescence as well. Early detection and appropriate treatment will ensure the best possible outcome in terms of sexual function and potential fertility.

Looking forwards to a year long fruitful association with you.

Happy Reading!

Kiran Guleria
Vice President AOGD (2017-18)

From the Secretary's Desk.....

Dear AOGDians

It is indeed an honour and privilege to represent AOGD as its honorary secretary for the year 2017-18. We hope to maintain the momentum generated by our predecessors and take AOGD to new heights.

This year the focus is on improving women's life by equipping the gynaecologist with knowledge and skills. This will be attained by various workshops on building skills spread over whole year. Another initiative is a series of CMEs on Antenatal Care – Best Practices. So, every month promises to be an academic bonanza.

The editorial team is working hard on the bulletin and each issue has a theme. The focus is on young doctors' learning by providing insights on management of various disorders in a clear-cut way.

In this era of social media, we are well connected to our dear members by our website "aogd.org" and our Facebook page "AOGD". We encourage you to visit these sites and benefit from information provided therein, and also welcome feedbacks.

The star of annual calendar, The conference is on 18th and 19th November, 2017 at India Habitat Center; I promise you it will be a veritable feast of academia. So save your dates, register early and take early bird discount.

Cheers!!

Abha Sharma
Secretary AOGD (2017-18)

Monthly Clinical Meet

Monthly Clinical Meet will be held at Fortis Hospital, Vasant Kunj
on **26th May, 2017** from 4:00-5:00pm.

Welcome.....
From the Editorial Board

Dear Friends,

Very warm greetings to Respected Seniors and Dear fellow AOGD members,

"Every new beginning comes with some other beginning's end."

We start the journey for a new year with this bulletin. A great responsibility has been bestowed upon us by our seniors and our job has been made tougher by the perfection and excellence shown by the previous teams. We will try our best to match our predecessors and bring out bulletins that will be both informative and interesting. Matching our theme for the year 2017-18 "Optimizing Women's health through Enhanced Skills and Best Practices' the emphasis will be more on improving the practical aspects.

The first bulletin focuses on Adolescents as the reproductive journey of every woman too starts with adolescence….a period with unique physical, emotional and psychological issues that shape the success of future life of an individual. To break the monotony of general articles, we are adding sections on Standard Operating Procedure & Prescription writing.

Considering the WHO theme for 2017 being "Depression: Let's Talk", we have included an interesting article about Body Dysmorphic Disorders in Adolescents. Another section introduced is on "Body, Mind & Soul" to give some aspect of healing beyond the traditional approach of allopathy.

In the end, you all will find an interesting quiz wherein you can just fill/ tick the answers and take a pic and whatsapp or email to us. Name of the first five winners will be published in next bulletin.

As famously written by Mirza Azeem Beg

गिरते हैं शहसवार ही मैदान–ए–जंग में
वो तिफ़्ल क्या गिरेगा जो घुटनों के बल चले।

We make an attempt with our best and sincere efforts and any suggestions and feedbacks are most welcome by our team.

The Editorial Team
AOGD (2017-18)

Contraceptive Update in Adolescents -Practices & Recommendations

Rachna Agarwal[1], Rashmi[2]

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Adolescence is the transition phase from childhood to adulthood. This is the time when young people start experiencing sexual feelings and many start developing sexual relationships also. About 30% of India's population is in the age group of 10-19 years. NFHS-3 data shows that over 19.7 million Indians aged 15–19 are currently sexually active – they are either unmarried, married or living together.

Unprotected intercourse predisposes teenagers to pregnancy and sexually transmitted infections(STI). Teenage pregnancies account for almost 16% of the total pregnancies in India and 9% of total maternal deaths. According to NFHS 3, 11% of females and 7% of males in the age group of 15-24 years had a history of sexually transmitted infection. Unwanted, unplanned pregnancies also increase the chances of unsafe abortions risking the life of young women. Even in United States 82% of adolescent pregnancies are unplanned, indicating a large unmet need for acceptable, reliable, effective contraceptive method for adolescents.

Contraception is a pillar in reducing adolescent pregnancy rates. With only 7 per cent of 15-19-year-olds using contraceptives as per the NFHS 3, the unmet need for family planning is higher among them at 27% compared to 13% unmet need across all age groups. With increasing awareness, contraceptive use has increased in adolescents, especially in western world, but they rarely use the most effective methods. Adolescents mostly use contraceptive methods with high typical use failure rate like condoms, withdrawal or oral pills.

Contraceptive methods

In general, adolescents are eligible to use all the methods of contraception as adults. Age alone does not constitute a medical reason for denying any method to adolescents. While some concerns have been expressed about the use of certain contraceptive methods, it is clear that many of the same eligibility criteria that apply to older clients also apply to young people.

While adolescents may choose to use any one of the contraceptive methods available in their communities, in some cases, using methods that do not require a daily regimen may be more convenient. Adolescents, married or unmarried, have also been shown to be less tolerant of side-effects and therefore have high discontinuation rates. Choice of method may also be influenced by factors such as sporadic patterns of intercourse and the need to conceal sexual activity and contraceptive use. Expanding the number of method choices offered can lead to improved satisfaction and increased acceptance. Proper education and counselling – both before and at the time of method selection – can help adolescents address their particular needs and make informed and voluntary decisions.

Counselling an integral part of adolescent contraception

As adolescence is a transitional phase, counselling should be appropriate as per the psychological state of the teens.

Early adolescence (11–14 years of age): There is greater interest in privacy and tendency to return to "childish" behavior hence counselor should break the ice by framing the discussion as just another preventive health and safety discussion.

Middle adolescence (15–17 years of age): There is a drive for independence & intense self-involvement, hence counselor should counter balance myths with accurate sex and contraceptive information. The counsellor should first ask regarding their knowledge.

Late adolescence (18–20 years of age): They have increased emotional instability, hence counselor should focus on safe sex.

It is important to ask all adolescents direct and open ended questions. Talking with the adolescent alone, without her parent or guardian, may gain additional and key information and maintain confidentiality. **Preventive visits** or Adolescent Friendly Health Services (AFHS) are a great venue for discussing contraception even before the initiation of sexual activity. Adolescents should be encouraged to delay initiation of sexual activity, and should be made aware of the ABC strategy- Abstinence, Be faithful and Contraceptive usage. The American College of Obstetricians and Gynecologists (ACOG) has recently published recommendations for the first visit with the gynecologist between the ages of 13-15 years.

Contraceptive Methods for Adolescents

Long-acting reversible contraception (LARC)

Long-acting reversible contraceptives (**LARC**) are

methods of birth control that provide effective contraception for an extended period without requiring user action. They include intrauterine devices (IUDs) and subdermal contraceptive implants.

LARC is the most effective type of reversible birth control (Failure rates < 1% in first year). LARC is safe, not user dependent, does not impact future fertility, does not require frequent use and depending on the method, can be used to prevent pregnancy for three to 10 years. Major professional societies, including the American College of Obstetricians and Gynecologists (ACOG) and the American Academy of Pediatrics (AAP), have endorsed LARC as a first-line contraceptive choice for teens. When proactively counselled, adolescents are more likely to choose IUD or implant as their method of contraception. It is especially useful immediate post partum and post abortal and has a high continuation rate.

Most common side effect with LARC usage is irregular bleeding. All LARC methods may affect menstrual patterns in different ways. Clinical trials involving the copper IUD indicate that abnormal heavy bleeding may occur in 10% of cases which may decrease to 5% after 8 months or more of use. Clinical trials involving the 5-year 52-mg LNG-IUS indicate that bleeding decreases over time, with as many as 70% of users developing amenorrhea or oligomenorrhea.

Despite side effects, continuation for LARC methods is high. In the Contraceptive CHOICE study, the continuation at 24 months for the 52-mg LNG-IUD, the CuT380A, and the ENG implant when specifically looking at adolescents 14 to 19 years of age, was 67% compared with 37% for non-LARC methods.

Intrauterine devices (IUD)

Hormonal: Levonorgetrel Intrauterine System (LNG IUS) (Mirena is for 5 years and Skyla is for 3 years)

Non Hormonal: IUD CuT 380A with a life span of 10 years

Despite past concerns, IUDs are now known to be safe for nulliparous adolescents. From menarche to 20 yrs of age is Category 2 according to WHO Medical Eligibility Criteria. Risks of pregnancy, infection and perforation are low among IUD users of any age. Contraindication to IUD's are active pelvic inflammatory disease, purulent cervicitis and multiple sexual partners.

Some common misconceptions with IUD usage are discussed below:

a) ***IUDs are not safe for adolescents as they increase risk of PID***

Beyond the first 21 days, IUDs do not increase rates of STIs or pelvic inflammatory disease (PID). Bacterial contamination at the time of insertion process is likely cause of infection, not the IUD per se. Screening for chlamydia can be performed at the time of placement. Unless there is concern for active cervical or uterine infection, there is no need to delay insertion of an IUD while awaiting test results. In most cases, women found to have positive cultures after insertion are unlikely to develop PID, if infection is promptly treated. LNG IUS may lower the risk of PID by thickening cervical mucus and thinning of the endometrium. However, all sexually active adolescents must be screened for STIs.

b) ***IUD increases risk of infertility in adolescents***
IUDs themselves do not cause tubal infertility in nulliparous women and studies support a rapid return to fertility after IUD removal.

c) ***IUD insertion may be technically more difficult in adolescents and nulliparous women***
Little evidence is available regarding technical difficulty and moderate to severe pain with insertion can be managed by proper counselling and analgesia.

d) ***IUD expulsion is less common in adolescents***
Limited data available suggests that expulsion, which occurs in fewer than 5% of women using IUDs, may occur more frequently in younger women (5-22%). Prior expulsion is not considered a contraindication for another IUD insertion.

Implant

Etonogestrel Implant (Implanon) is approved by US FDA and is effective for 3 years. Pregnancy must be excluded before insertion. Most common side effects are irregular bleeding and weight gain. In clinical trials, 12% of women reported weight gain and 2.3% discontinued for this reason. However, in an analysis from CHOICE project, although mean weight gain in the first year was 2 kg, when controlling for potential confounders, this gain was not statistically significant compared with the copper IUD. Contraindications for ENG implant are based on the hormonal content and include diseases uncommon in the adolescent population, such as breast or endometrial cancer and severe liver cirrhosis.

Intermediate acting

Depot Medroxy Progesterone Acetate (DMPA): It consists of 150 mg of medroxyprogesterone acetate that is given I/M every 12–14 weeks. It is a good choice for adolescents because it allows privacy and does not require daily action. With typical use, the first-year failure rate of DMPA is 6%, which makes it less effective than LARC methods but more effective than short-acting or barrier methods. Other advantages include improvement in dysmenorrhea and protection against iron deficiency anemia and endometrial cancer. DMPA is safe for most patients with chronic illness. ***The following misconceptions are there with DMPA usage:***

a) ***Risk of decrease bone mineral density***
Most studies have found that women lose bone mineral density (BMD) during DMPA use, but

recover BMD after discontinuation. There is a concern whether adolescents can reach peak bone mass after discontinuation of DMPA. The relationship between these changes in BMD during the reproductive years and future fracture risk is unknown. The ACOG Committee on Adolescent Health and Association of Reproductive Health Professionals state that concerns about bone loss should not limit the use of DMPA in adolescents. They should follow age-appropriate recommendations for calcium and vitamin D supplementation. Estrogen supplementation, dual-energy x-ray absorptiometry scans should only be advised in girls who have osteopenia or are at increased risk of osteoporosis, and discontinuation at 2 years is not required.

b) ***Weight gain***
All contraceptive options are considered safe in overweight and obese adolescents (category 1 or 2). Depot medroxyprogesterone acetate is a WHO MEC category 2 in obese adolescents. Although obesity does not seem to affect efficacy, further weight gain is a concern. Adolescents interested in DMPA should be counseled about possible weight gain. Studies in both adolescents and adults suggest that weight gain status at 6 months is a strong predictor of future excessive weight gain with ongoing DMPA use.

Short-acting hormonal methods

These include combined oral contraceptive pills (COCs), contraceptive vaginal ring (Nuva Ring), contraceptive patch (Ortho Evra) and progestin-only pills (POPs).

Combined OCPs

The combined pill is the most commonly used method in this group with the usage rate reaching up to 50% because it is safe, predictable, ensures regular and pain free menses, convenient, and privacy can be maintained. A wide range of options are available and all the brands are almost equally effective and any one can be used conveniently.

Type of pills

Standard pills of ethinylestradiol (30 microgram) and levonorgestrel given for 21 days in a 28 days cycle is most commonly used. Pills with newer progestogens like desogestrel and cyproterone acetate can be given in polycystic ovarian disease and hirsutism. Extended cycle pills given for 84 days are useful in adolescents with anemia, endometriosis and abnormal uterine bleeding.

There are **many advantages** of combined hormonal methods including improved acne, regulation of menstrual blood flow and cyclicity, treatment of dysmenorrhea, improved premenstrual symptoms, reduced risk for ectopic pregnancy and pelvic inflammatory disease, as well as reduced risk for ovarian and endometrial cancer, benign breast disease and iron deficiency anemia. Unfortunately, despite the wide use of OCPs, adolescents have failure rates as high as 15% in the first year of use because of missed pill. Such cases may need more motivation and can be advised quick start method i.e. initiation of the contraceptive method at any day of cycle with a backup of 7 days when desired.

Nuva Ring

It is a contraceptive ring containing ethinyl estradiol and etonorgestrel. Failure rate is <1% as there is high compliance with minimal side effects like discharge, discomfort and device problems.

Ortho Evra patch

It is a weekly patch containing etinylestradiol and norelgestromin, with less side effects. The compliance is also high because of easy and less frequent administration and less side effects.

Progestin-only pills

Progestin-only pills, work primarily by thickening cervical mucus, and the newer progestogen desogestrel also inhibits ovulation. The advantage is it avoids estrogen related side effects and especially useful in conditions where estrogens are contraindicated.

Disadvantages include a higher failure rate as stringent adherence is necessary. If pill intake is delayed by more than 12 hours, this increases failure rate and requires back up method. Breakthrough bleeding is a common problem that can lead to non - compliance. Therefore POPs are not considered good choice for adolescent girls.

Some practical issues regarding hormonal contraception are discussed below:

a) ***It is necessary to do a speculum or bimanual examination before initiating oral contraceptive pill***
Bimanual examination with cervical inspection is not needed before initiation of COCs or the contraceptive patch or the vaginal ring. ACOG recommends that sexually active adolescents have their first Papanicolaou test at the age of 21 years. Before that examination, STI testing, if needed, can be done by urine testing or vaginal swab without a speculum examination. Further examinations are necessary only if the adolescent has a specific complaint or concern.

b) ***Adolescent smokers should not be prescribed combined hormonal methods.***
Although all adolescents who smoke should be encouraged to quit, smoking does not impact their contraception choices. The WHO MEC gives a category of 2 for all combined hormonal use with any quantity of smoking younger than 35 years.

c) ***Adolescent should not be prescribed COC with migrane/headache***

If a diagnosis of migraine with aura is established, the adolescent is not a candidate for estrogen-containing birth control methods (MEC category 4). If a woman younger than 35 years has migraine without aura, initiation of estrogen-containing methods is MEC category 2.

d) Adolescent should not be prescribed COC with DVT

Adolescent females with a personal history of deep vein thrombosis (DVT) or pulmonary embolism (PE) are not candidates for estrogen-containing methods (MEC category 3 or 4 depending on risk for recurrence), nor are women with a known thrombogenic mutation (MEC category 4). For these women, it is essential to get a detailed history of the event or even medical records because many adolescents may not be sure of the diagnosis. Low-dose (less than 50 mcg of ethinyl estradiol) oral contraceptives pose less risk than older, higher-dose formulations. Cigarette smoking increases the risk of DVT in women using combination contraceptives, particularly who smoke more than 15 cigarettes per day.

e) Hormonal contraceptives increase risk of fractures in adolescents.

Evidence about whether CHC use affects fracture risk is inconsistent, although recent studies show no effect. CHC use may decrease bone mineral density (BMD) in adolescents, especially in those choosing very low dose formulations

f) Hormonal contraceptives in adolescents increase risk of breast cancer later in life

A 1996 analysis of epidemiologic data from more than 50 studies worldwide by the Collaborative Group on Hormonal Factors in Breast Cancer found that women who were current or recent users of birth control pills had a slightly higher risk of developing breast cancer than women who had never used the pill. **The risk was highest for women who started using oral contraceptives as teenagers**. However, 10 or more years after women stopped using oral contraceptives, their risk of developing breast cancer had returned to the same level as if they had never used birth control pills, regardless of family history of breast cancer, reproductive history, geographic area of residence, ethnic background, differences in study design, dose and type of hormone(s) used, or duration of use. In addition, breast cancers diagnosed in women who had stopped using oral contraceptives for 10 or more years were less advanced than breast cancers diagnosed in women who had never used oral contraceptives.

Recent study suggested that use of combined oral contraceptives is associated with an increased breast cancer risk, which may vary by formulation. They **found use of oral contraceptives involving high-dose estrogen** (OR, 2.7; 95% CI, 1.1–6.2), ethynodiol diacetate (OR, 2.6; 95% CI, 1.4–4.7**), or triphasic dosing** with an average of 0.75 mg of norethindrone (OR, 3.1; 95% CI, 1.9–5.1) compared with using other oral contraceptives was associated with particularly elevated risks. Estrogen is the driver in breast cancer pathogenesis and estradiol is the most likely estrogen implicated. Role of progesterone is uncertain, mitotic activity in breast tissue does increase in luteal phase and progesterone may be responsible. The risk is maximum before a full-term delivery as estrogens act more on less differentiated tissue.

g) Oral contraceptives increase cervical cancer risk

Report by the International Agency for Research on Cancer **found threefold increase in** cervical cancer risk among human papillomavirus infected women who had used oral contraceptives for 5 to 9 years compared with women who had never used oral contraceptives. Oral contraceptives used for 10 years or longer increased risk to four times. Virtually all cervical cancers are caused by persistent infection with oncogenic HPV, and the association of cervical cancer with oral contraceptive use is likely to be indirect.

h) Oral contraceptives increase liver cancer risk

Oral contraceptive use is associated with an increase in the risk of benign liver tumors, such as hepatocellular adenomas. However, association with malignant hepatocellular carcinoma is less clear with studies reporting contradictory findings.

i) Oral contraceptives increase risk of all genital malignancies.

Oral contraceptive use has consistently been found to be associated with a reduced risk of ovarian cancer and endometrial cancer. The risk reduction is higher with longer duration of use and protection continues even after stopping the pills. **The risk decreases by 10 to 12 percent after 1 year of use and by approximately 50 percent after 5 years of use**. The Cancer and Steroid Hormone (CASH) study has indicated that oral contraceptive formulations with high levels of progestin were associated with a lower risk of ovarian cancer than formulations with low progestin levels. Steroid Hormones and Reproduction (SHARE) Study found **no difference in ovarian cancer risk between androgenic and nonandrogenic pills**.

Barrier methods

Male condom is the most common contraceptive method used by adolescents with advantage of being easily available, male involvement and protection from various sexually transmitted diseases. But with the

typical use failure rate of 18% for all users and still higher among adolescents, this is not an ideal method for contraception. This is the best method for protection against STI's.

Emergency contraception

The following options are avaialable:

a) Progestin: Levonorgestrel single 1.5-mg dose

b) Combined estrogen and progestin (Yuzpe regimen)

c) Selective progesterone receptor modulator (ulipristal acetate)

d) Intrauterine Device

Levonorgestrel EC is preferred to the Yuzpe regimen because of the superior adverse effect profile and effectiveness, which is up to 85%. Ulipristal acetate may have greater effectiveness than oral levonorgestrel at the end of the 5-day window of use and adverse effect profile is similar to those of levonorgestrel. Ulipristal may be more effective in people who weigh more than 165 pounds.

The copper intrauterine device (IUD) is the most effective method of emergency contraception and can be placed up to 120 hours after unprotected intercourse with a failure rate of < 1%. It can further be continued as long acting contraception. It is commonly believed that teenagers who have easy access to EC increase their unsafe sexual behaviors. Increased access to EC has been shown to double the likelihood that an adolescent uses the medication and that she uses it sooner after unprotected intercourse. Advanced provision is not associated with more unprotected sexual intercourse, less condom use or more effective contraception use.

Conclusions

LARC methods are now considered as first choice for adolescent contraception. **Dual protection** i.e. use of barrier contraception along with some other form like hormonal method or intrauterine device is ideal as it also provides protection against STI's. It is of utmost importance to counsel the adolescents regarding contraception and encourage sexual absteinence.

Suggested reading

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Congratulations

Dr Neerja Bhatla, Professor, Department of Obstetrics & Gynaecology, AIIMS, New Delhi and Chairperson, FOGSI, FIGO Oncology Committees has been elected as Secretary-General of the International Federation of Cervical Pathology and Colposcopy (IFCPC), for the period 2017-2020.

Fertility Preservation in Adolescent and Young Adult (AYA) Females with Cancer

Anshuja Singla
Assistant Professor, Department of Obstetrics & Gynaecology, University College of Medical Sciences & Guru Teg Bahadur Hospital, Delhi

Introduction

As per The National Cancer Registry of India, the annual number of patients who develop cancer will rise from 9.79 lakhs in 2010 to 11.4 lakhs in 2020. Adolescents and young adults (AYAs) are the ones between the ages of 13 to 24 years and constitue 20% of India's population. Although, cancers in adolescence are less that 2% of cancers in all age groups, they are the most common cause of non accidental deaths in this age group. The most frequently diagnosed cancers in AYAs are leukemias, lymphomas, central nervous system tumors, germ cell tumors, sarcomas, melanomas, thyroid and breast cancer.

Multipronged approach has led to increase in the five-year survival rates but in lieu exposes more patients to later effects of cancer treatments like sexual dysfunction, disfigurement, infertility, adverse reproductive outcomes, social stigmas and economic disadvantages. Cancer patients are fearful that the disease and treatment thereafter may adversely impact their offsprings placing them at a risk of malignancy, congenital anomalies and disorders of growth and development. The magnitude of risk depends on factors like age at start of treatment, gender, genetic factors involved, treatment modality, choice and dose of chemotherapy, type and stage of cancer, radiation field and cumulative dose.

With all these concerns in mind, the very recent concept of oncofertility i.e. fertility preservation in cancer patients came into being. Thus, the emphasis moved from quantity of life in years to providing quality of life. The International Society for Fertility Preservation strongly recommends fertility preservation before cancer treatments if the chance of losing fertility is over 30% with therapy.

Effects of Cancer Therapy

Chemotherapy and radiotherapy, the mainstay of cancer treatment, have different degrees of damaging effects on the reproductive potential. Chemotherapeutic drugs affect ovaries to varying extents depending on the type of drug, age of the patient and the baseline ovarian reserve. The effect ranges from no or minimal effect in the pre-pubertal age to ovarian failure in older women. Alkylating agents have the maximum damaging effects. Bevacizumab used for colorectal cancers has a 34% ovarian failure rate when compared to 2% in women with regimens without the same.

Radiotherapy has damaging effects on both ovaries and the uterus. The median lethal dose (LD50) for human oocyte is <2 Gy. The number of primordial follicles at the start of treatment and the cumulative dose of radiation determines the residual fertility. Endometrial atrophy occurs with direct irradiation and an exposure of total body irradiation (TBI) of 12 Gy is associated with significant uterine damage. Cranial radiation greater than 35 to 40 Gy can impair the hypothalamic pituitary function and cause hypogonadism through gonadotropin-releasing hormone (GnRH) deficiency.

Increased rates of miscarriage, preterm labour, fetal growth restriction (FGR) and low birth weight (LBW) are reported especially if conception occurs within a year post radiotherapy. It is suggested that patients receiving >45 Gy during adulthood and >25 Gy in childhood should be counselled against attempting pregnancy due to a very high risk of genetic mutations in the offsprings.

Reproductive Health Counselling

Many surveys of female cancer survivors have shown that only about 50% recalled receiving reproductive health counseling and the rate of pregnancy termination in cancer patients are much higher when compared to their normal counterparts. In 2006 American Society of Clinical Oncology published their first recommendations on fertility preservation. They stated that 'as a part of education and informed consent before cancer therapy, oncologist should address the possibility of infertility in reproductive age patients and so fertility preservation options should be discussed with appropriate reference to reproductive specialist'. The mental health professionals and genetic counselors should be there to discuss and help decision making. The ASCO (2013) update recommends that discussion about fertility preservation with all reproductive age patients should be as early as possible before the start of treatment with documentation in medical records and referrals should be sent to reproductive health specialists and psychosocial health providers. Patients should be encouraged to participate in registries and clinical studies to help collect evidence. Both fertility protection and preservation techniques are available.

Fertility protection

It can be done either surgically or medically.

1. **Fertility sparing surgeries**
   a) ***Ovarian transposition (oophoropexy):*** Ovaries are transposed out of the field of radiation and anchored to the pelvic brim or as laterally as possible. But due to radiation scatter these are not always protected. In addition, due to the risk of remigration of ovaries, this procedure should be timed close to the radiation treatment. Risks include cyst formation, adhesions, chronic pelvic pain, premature ovarian failure, difficult transvaginal oocyte retrieval and 1% risk of metastatic disease.

   b) ***Ovarian shielding:*** A simple and conservative method to preserve fertility, though technical problems limit its use.

   c) ***Conservative Surgeries***: Borderline ovarian tumors in young women <40 years are best managed with unilateral salpingo-oophorectomy or cystectomy with a strict follow-up. Germ cell tumors particularly do well with fertility sparing surgeries.

   d) ***Radical trachelectomy***: In young females with early stage cervical cancer ($1A_2$ to 1B) radical trachelectomy can be done. Risks include cervical incompetence, preterm labour, cesarean sections and low birth weight.

2. **Medical Therapy**
   As per ASCO (2013) update, ovarian suppression with GnRH agonists is currently more of an experimental tool and is 'off label' for use in fertility preservation. A 2011 Cochrane Review concluded that GnRH agonist should be considered in females of reproductive age receiving chemotherapy. Administration should begin 10 days before chemotherapy till 2 weeks after the end of chemotherapy.

   Potential mechanisms of action include ovarian suppression, preserving those follicles that have initiated growth, or interruption of FSH-initiated accelerated follicular recruitment and hence atresia. GnRH analog may also cause reduction of blood flow to the ovary resulting in GnRH analog–induced ovarian quiescence, thereby reducing exposure to the gonadotoxic agent.

Fertility preservation techniques

1. **Embryo cryopreservation:** It is the recommended first line approach reserved for patients with partners and is routinely used for storing surplus embryos after IVF. Ideal stimulation should begin within 3 days of menstrual cycle though random stimulation is also successful. In the last decade, letrozole and tamoxifen have been used for ovarian stimulation for fertility preservation in females with estrogen sensitive tumors. Letrozole enhances ovarian stimulation while keeping estradiol levels to near normal. Ethical and legal concerns include disposal of embryos in case of the death of the patient, sperm donor or partner in case of unmarried women and cases when couple separation occurs. The treatment also requires 10 to 14 days for follicular development, and this may not be possible for young women requiring urgent commencement of chemotherapy.

2. **Oocyte cryopreservation:** It is another first line recommended method and rather the best as the woman can maintain her reproductive autonomy, though ovarian stimulation is still required. Initially it was a challenge due to oocyte fragility, but with the advent of new freeze –thaw techniques success rate as high as 60% is achieved. Limitations include limited number of oocytes, not useful in prepubertal girls and hormonal stimulation is required for oocyte retrieval which maybe a constraint in some women.

   The recommended duration of oocyte and embryo cryopreservation varies from 3-10 years.

3. **Ovarian tissue cryopreservation (OTC) & auto transplantation:** Ovary auto transplantation involves ovarian tissue extraction, freezing/thawing, and transplantation back into the same patient. There are three major types of human ovary autotransplantation including (a) transplantation of cortical ovarian tissue (orthotopic or heterotopic), (b) transplantation of a whole ovary, and (c) transplantation of ovarian follicles (artificial ovary).

   Ovarian tissue is obtained either by laparoscopy or laparotomy, is dissected into small fragments and cryopreserved by slow freezing technique or vitrification. A small part of one ovary is retrieved (at least 50%) or the entire ovary in case the risk of gonadotoxicity is extremely high.

   As a preparation for freezing, ovarian cortex is dissected from medulla and further cut into ultra-thin strips (~10×5×1 mm each), slices (~4×2×1 mm each), or cubes (~2 mm^3 each). In case of cryopreservation of a whole ovary, a large part of its vascular pedicle is conserved. Both the techniques ensure proper perfusion of cryoprotectants and efficient revascularization after autotransplantation.

   The tissue (cortex) is transplanted after therapy completion either into the pelvis (orthotopic) or outside (heterotopic) i.e. forearm, thigh etc. Heterotopic auto transplantation is surgically easier and considered as a good alternative to orthotopic auto transplantation in case of severe pelvic adhesions or poor pelvic vasculature. It allows easy monitoring of the grafted ovarian tissue, and may reduce the risk of reintroducing malignant cells due to avascular

grafting. However, it may increase post-grafting ischemia and follicle atresia, provide abnormal environment for follicle and oocyte development and does not allow spontaneous pregnancy.

The overall advantages of oocyte tissue cryopreservation and transplantation are that it does not delay the start of cancer therapy, there is no need of ovarian stimulation, partner independent, preserves the larger pool of follicles and is the only method available for prepubertal girls. The risk of reseeding of tumor cells after OTC is a concern. Hence, screening with histological evaluation or tumor markers can be offered. Techniques are being developed to reduce this risk, such as isolated follicle grafting.

Autotransplantation of frozen-thawed whole ovary and artificial ovary is still in research settings as an option for female fertility preservation. The latter has an advantage of negligible risk of carrying malignant cells.

4. **In-vitro maturation (IVM):** It involves aspiration of immature oocyte in the luteal phase after minimal or no stimulation followed by IVM and cryopreservation of mature oocytes or embryos developed after fertilization.

In fertility preservation, special concerns are young women with estrogen and progesterone receptor positive breast cancer and children with hematological malignancies.

Breast Cancer

Hyperestrogenemia because of ovarian stimulation is a challenging problem. Use of aromatase inhibitor like letrozole with milder stimulation protocols can be of help. OTC and IVM can be offered to patients not willing for ovarian stimulation, though there can be chances of missing an occult epithelial malignancy. BRCA positive patients can undergo preimplantation genetic diagnosis on their embryos.

Hematological malignancies

Children with leukemias and lymphomas may be good candidates for GnRH agonist administration to manage ovulation and menstrual bleeding during chemotherapy. Post-pubertal girls under the age of 18 years can undergo oocyte cryopreservation after ovarian stimulation.

The ASRM practice committee recommendations for fertility preservation requirements include rapid access, multidisciplinary medical team, experienced ART professionals & programs under institutional review board approved protocols, mental health professionals and genetic and financial counselors.

Conclusion

Disease free survival with a longer life expectancy is becoming possible in a larger number of AYAs. Inability to take timely and appropriate action may nullify their reproductive potential resulting in emotional and mental stress. Hence, appropriate fertility preservation options should be discussed timely with a resort to immediate action.

Suggested Reading

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AOGD Achievements at Yuva FOGSI 2017

28th-30th April, 2017, Lucknow

- **Dr Aparna Sharma,** Associate Professor, AIIMS, delivered the Kamini Rao Yuva FOGSI Oration
- **Dr Neelanchali Singh,** , Assistant Professor, MAMC, received the FOGSI Future Award 2017
- **Dr Sparsha** PG, MAMC awarded 1st prize for Best Paper on MCH Care
- **Dr Divya Arora** & **Dr Priyanka Khandey** of MAMC won North Zone FOGSI Quiz at Yuva FOGSI Conference at Lucknow, out of 14 teams of North India.

Heartiest Congratulations to youngsters!!

Endometriosis in Adolescents

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Endometriosis affects 10% to 15% of all reproductive-age women. In adolescents undergoing laparoscopy for pelvic pain refractory to common medical treatments, rates of endometriosis has been shown to be as high as 50% - 70%.

Endometriosis is the most common cause of secondary dysmenorrhea in adolescents. The onset of dysmenorrhea soon after the onset of menarche (within the first 6 months) should raise the suspicion of a secondary cause and, in particular, obstructive Müllerian anomalies. Congenital anomalies of the reproductive tract have been found in up to 11% of adolescents with endometriosis, and endometriosis is reported to be present in up to 76% of patients with Müllerian anomalies and outflow tract obstruction.

Endometriotic lesions have been documented as early as 1-6 months after the onset of menarche and even in premenarcheal girls with breast sexual maturity staging of I to III. Hence, the onset of thelarche may be considered a developmental milestone at which endometriosis should be considered.

Symptoms

Endometriosis in adolescents presents a diagnostic challenge, as the classical triad of cyclical chronic pelvic pain, progressive worsening dysmenorrhea, and dyspareunia is not seen. Patients with a completely obstructed outflow tract (e.g., with an imperforate hymen or a transverse vaginal septum) may present with cyclic pain, primary amenorrhea and often a pelvic mass. As adolescents may not be sexually active, dyspareunia and infertility are not the usual adolescent symptomatology. Bowel and bladder symptoms are common in adolescents. Gastrointestinal symptoms, such as acute abdominal pain, severe constipation, diarrhea, and nausea are other frequently reported symptoms. Less frequently, ovulatory pain, dyspareunia, or excessive menstrual bleeding may be the presenting complaint (Table 1).

Table 1. Symptoms of Adolescents with Endometriosis

Presenting Symptoms	Percent
Acyclic and cyclic pain	62.5
Acyclic pain	28.1
Cyclic pain	9.4
Gastrointestinal pain	34.3
Urinary symptoms	12.5
Irregular menses	9.4

Adolescents usually have multiple visits to physicians and various diagnosis like PID and IBS are made before the final diagnosis. Consequently, this delay may decrease their reproductive potential and functional outcomes.

History

HEADSS is a framework for history-taking in adolescents that begins with topics which may be comfortable to discuss and concludes with more sensitive questions: **H**ome or housing, **E**ducation and employment, **A**ctivities, **D**rugs, **S**exual activity and sexuality, and **S**uicide and depression. Privacy and confidentiality is an integral part of history taking.

A pain diary documenting frequency and character of pain will help the caregiver to determine whether pain is cyclic, and if it is related to bowel or bladder function. Complaints of difficulty participating in normal activities, missing school, or avoiding extracurricular activities secondary to pain suggest that medical intervention is required. A history of sexual abuse or physical abuse should be ruled out. Adequate family history is essential, as the incidence of endometriosis in patients with affected family members is 6.9% compared to 1%-2% for the general population.

Examination

A physical examination is very important, to determine the etiology of the pain and to exclude all other causes. Inspection of the external genitalia, with separation and traction of the labia, may demonstrate low outflow tract anomalies. Asymmetric outflow tract anomalies such as obstructing hemivaginal septum should also be ruled out. A cotton-tipped swab may be inserted into the vagina to ensure that it is of normal length if a bimanual and speculum examination is not possible. For an adolescent who is not sexually active, a rectal exam can be performed. In sexually active adolescents, a per vaginum examination to rule out other causes of pain, such as pelvic inflammatory disease, ovarian cysts, and complications of pregnancy should be done.

The physical examination is usually normal. The positive findings suggesting endometriosis include tenderness on palpation of the vaginal fornices and the rectovaginal septum, cervical motion tenderness detection of palpable nodules in vaginal fornices or paracervical regions, deviated cervix, and presence of blue lesions

on surface of the cervix. The sensitivity of the clinical examination is greater when performed during the premenstrual period.

Investigations

Laboratory studies should include a pregnancy test. A CBC (complete blood count) and erythrocyte sedimentation rate will help to rule out an acute or chronic inflammatory process. Urinalysis and urine culture rules out a urinary tract source of pain. Sexually transmitted disease testing should be done when appropriate.

Imaging studies

Imaging has limited utility in the diagnosis of endometriosis, as it lacks adequate resolution to identify adhesions or superficial peritoneal implants. However, ultrasound may be useful to identify/exclude structural causes of pelvic pain, such as ovarian torsion or hemorrhage, tumors, genital tract anomalies, and appendicitis.

Transvaginal ultrasound in sexually active adolescents can help diagnose endometriomas, bladder lesions, and deep nodules such as those in the rectovaginal septum. Performing the sonography with the vaginal probe can also be associated with indirect signs of the disease, the so-called "soft markers" (painful trigger points with pressure with the vaginal probe, the presence or absence of mobilization of the ovaries, the presence of fluid in the pelvis) to increase the diagnostic sensitivity of examination. A transrectal approach may be considered in adolescents with an intact hymen, it also helps in detecting rectal involvement in endometriosis and the lesions on posterior bladder wall.

Magnetic resonance imaging is better to define an abnormality suspected by sonography, but should not be used as a first-line imaging test because of its expense and poor sensitivity for detecting peritoneal lesions or staging endometriosis. MRI may help guide surgical approach for patients with suspected deep infiltrating endometriosis and in diagnosing rectosigmoid lesions and endometriosis of the bladder.

Computed tomography is an insensitive test, but is particularly useful to detect ureteral involvement.

Various biochemical markers including CA 125, CA 19.9, ICAM-1, and IL-6 together with follistatin and urocortin have proven to be the most reliable markers for endometriosis. However, their role is limited to the assessment of disease recurrence and follow up after surgical treatment.

Management

The choice of treatment depends on the severity of the patient's symptoms, the extent of disease, and compliance. The first-line therapy in adolescents with endometriosis includes oral contraceptives (OCPs) and analgesics (NSAIDs). The use of GnRH analogues during adolescence is controversial, as possible impacts on bone mass have been reported. Additionally, some parents have concerns in utilizing a medication with known adverse effects empirically, without a definitive diagnosis.

Medical Management

Non steroidal Anti-inflammatory Agents.

NSAIDs are appropriate empiric treatment for dysmenorrhea and pelvic pain associated with endometriosis. Acetaminophen and mefenamic acid are the commonly prescribed analgesics with good efficacy and minimal side effects.

Hormonal Suppression.
Combination Estrogen and Progestin Therapy.

Combined pills improve symptoms of dysmenorrhea by suppressing ovulation, decreasing menstrual flow and creating a hormonal "pseudopregnancy" state in which endometrial implants are relatively inactive. Use of low-dose cyclic OCP is effective in reducing pain symptoms in patients with endometriosis. There are some data to suggest that continuous administration, without a 7-day break, to avoid withdrawal bleeding, may be more beneficial in terms of pain relief. Biologically this is plausible since it is believed that patients with endometriosis are prone to retrograde menstruation. Initially, OCPs are to be given for 3 months. With pain relief, this treatment is to be continued for 6-12 months. Similarly, the contraceptive patch (OrthoEvra) or the vaginal ring (NuvaRing) can be given continuously to suppress menses, pain, and endometriosis.

Danazol

Danazol is a 17—ethinyltestosterone derivative that creates an acyclic environment, and various studies have shown its efficacy in treating endometriosis to be equivalent to GnRH agonists. However, because of its significant androgenic side effects, this medication is not widely utilized in management of endometriosis.

Progestins

Progestational agents include oral (norethindrone acetate, medroxyprogesterone acetate), injectable (depot medroxyprogesterone acetate) and intrauterine system (LNG-IUS), which improve symptoms in approximately 80% to 100% of patients with endometriosis. Norethindrone acetate, 5 to 20 mg daily, has been effective in most patients for relieving dysmenorrhea and chronic pelvic pain.

At therapeutic doses, progestins may cause weight gain, bloating, depression, and irregular bleeding.

Long term use of progestins in adolescents may have detrimental effect on bone mineral density and hence, NICE recommends caution in prescribing DPMA to adolescents but it may be given if other methods are not suitable or acceptable.

Similarly, there is a lack of data on the use of levonorgestrel intrauterine system (LNG-IUS) in adolescents; it may be prescribed for sexually active teenagers as a long term maintenance treatment. LNG-IUS may be an effective therapy for rectovaginal endometriosis, lessening dysmenorrhea and non-menstrual pelvic pain along with a slight reduction in the size of fibronodular rectovaginal plaques. It also serves as a contraceptive method in sexually active adolescents.

Dienogest

Dienogest is a newer progestin that lacks androgenic effects; rather, it has beneficial antiandrogenic properties causing minimal changes in lipid and carbohydrate levels.

Dienogest is associated with moderate inhibition of gonadotropin secretion, leading to a modest reduction in the endogenous production of estradiol. When given continuously, dienogest induces a hypoestrogenic, hypergestagenic local endocrine environment, causing decidualization of endometrial tissue followed by atrophy of the endometriotic lesions. It also demonstrates antiproliferative, anti-inflammatory, and antiangiogenic effects.

Dienogest at a dose of 2 mg daily has been studied extensively and has shown efficacy, safety, and tolerability profile that is favorable for long-term use. The intensity of pain decreases progressively, adverse events are predictable and associated with low discontinuation rates, and bleeding irregularities are reduced in intensity and frequency over time.

Gonadotropin-Releasing Hormone Agonists.

With GnRH agonists, more than 90% of patients become amenorrheic and hypoestrogenic. Pain relief persists after cessation of treatment over the next 6-12 months. GnRH agonists should be avoided in adolescents younger than 16 years over concerns of adverse affects on permanent bone density. Use of an add-back regimen can reduce or eliminate bone mineral loss associated with GnRH agonists and provide symptomatic relief without reducing pain relief. They may include progestins alone, progestins plus bisphosphonates, low-dose progestins, or estrogens. The U.S FDA has approved the use of norethindrone (5 mg daily) as add-back therapy in conjunction with a GnRH agonist. In girls who cannot tolerate high-dose norethindrone, a daily combination of transdermal estradiol (25 mcg) and oral medroxyprogesterone acetate (2.5 mg) can be used. However, this regimen has not been approved by the FDA. Calcium supplementation (1,000 mg daily) is recommended.

Prior to the initiation of "retreatment" with a GnRH agonist or if therapy is to be prolonged greater than 9 months, a baseline bone density evaluation should be obtained, then repeated 6 months later and, if stable, repeated every 2 years.

Non response to medical treatment

If pain does not respond to aggressive medical therapy, surgery should be considered.

Surgical Management

Patients who do not respond to these medications require laparoscopy which remains the gold standard for diagnosing endometriosis and also allows treatment in the same sitting. To minimize visible scarring, the laparoscope trocar can be placed through a vertical incision directly in the umbilicus. Additional operative ports should be placed symmetrically 1 to 2 cm above the pubic symphysis so that the pubic hair will grow over the incision site(s).

In adolescents atypical endometriotic lesions are seen more commonly as compared to adults. Thin, clear or red lesions are predominant, blue or brown lesions are rare. Powder-burn lesions are less common in adolescents. Visualization of lesions through a liquid distention medium may facilitate identification of clear vesicular lesions. Peritoneal Alan-Masters windows, thin pelvic adhesions between the ovaries and the peritoneum; and superficial implants on the peritoneum of the Douglas pouch, the uterosacral ligaments, and the rectovaginal septum are also common. If no evidence of endometriosis is identified, a cul-de-sac biopsy to rule out microscopic disease should be performed.

The lesions should be treated with electrocautery, endocoagulation, or laser. Surgery has been shown to reduce pain from endometriosis in rates of 38% to 100% of adult women. Care must be taken to avoid damage to the ureters, major vessels, bowel, and bladder.

Ovarian Endometrioma

All stages of endometriosis, can be found in teenagers and the condition is not limited to early forms only as was thought earlier. Ovarian endometriomas have a detrimental impact on follicle reserve in young patients, endometrial cells on the surface of the ovary cause ovarian adhesions and pseudocysts and secondly, cause mesenchymal cell metaplasia in the interstitial ovarian tissue, sclerosis, and follicle loss. Whether full ablative surgery should be envisaged in an early stage of the disease is still debatable. Early ablative surgery can contribute to a lower morbidity, a relief of symptoms, and a better quality of life. Early treatment results in less damage to the ovary caused by the disease itself and by a less invasive surgical procedure. Cystectomy should

be performed instead of drainage and coagulation.

However, some practitioners prefer contraceptive pills with six monthly follow-up to exclude the increase of endometrioma and to evaluate the regression of pain.

Surgery alone is not adequate to treat endometriosis as there can be microscopic residual disease that must be suppressed with medical therapy. Recurrence of symptoms and/or endometriosis is a major concern after surgery in adolescents. Tandoi et al. reported a 56% recurrence during a 5 year follow up amongst 57 young women. The goal of medical therapy is to treat pain from postoperative residual disease and suppress progression but it does not seem to prevent disease recurrence or progression of peritoneal endometriosis, and has not been shown to improve future fertility.

Follow up

Regular follow-up visits should be planned every 3 to 6 months initially, and then once annually, to evaluate the disease progression with clinical and sonographic examination and to reconsider hormonal therapy in case of side effects or changes in patient compliance.

Like other women with chronic pelvic pain, adolescents may be helped by multimodal therapy and a biopsychosocial model of care. Behavioural modification techniques (biofeedback, relaxation, hypnosis), cognitive therapy, and complementary therapies (acupuncture) may be used in a multidisciplinary approach.

Summary

To summarize, adolescent endometriosis is a common entity that presents a diagnostic challenge. The clinical presentation is atypical as well as the lesions seen on laparoscopy are quite different from those seen in adults. Laparoscopy remains the gold standard for diagnosing endometriosis. Medical therapy is the mainstay of treatment in adolescents which has to be continued for long, since the disease is progressive in nature.

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Calendar of Monthly Clinical Meetings 2017-18

Months	Name of the Institute
May, 2017	Fortis Hospital, Vasant Kunj
June, 2017	Army Hospital-Referral & Research
July, 2017	All India Institute of Medical Sciences
August, 2017	VMMC & Safdarjung Hospital
September, 2017	Hindu Rao Hospital
October, 2017	ESI Hospital, Basaidarapur
November, 2017	MAMC & LN Hospital
December, 2017	Sir Ganga Ram Hospital
January, 2018	Dr RML Hospital
February, 2018	Lady Hardinge Medical College
March, 2018	UCMS & GTB Hospital
April, 2018	Apollo Hospital, Sarita Vihar

SOP: Adnexal Masses in Adolescents

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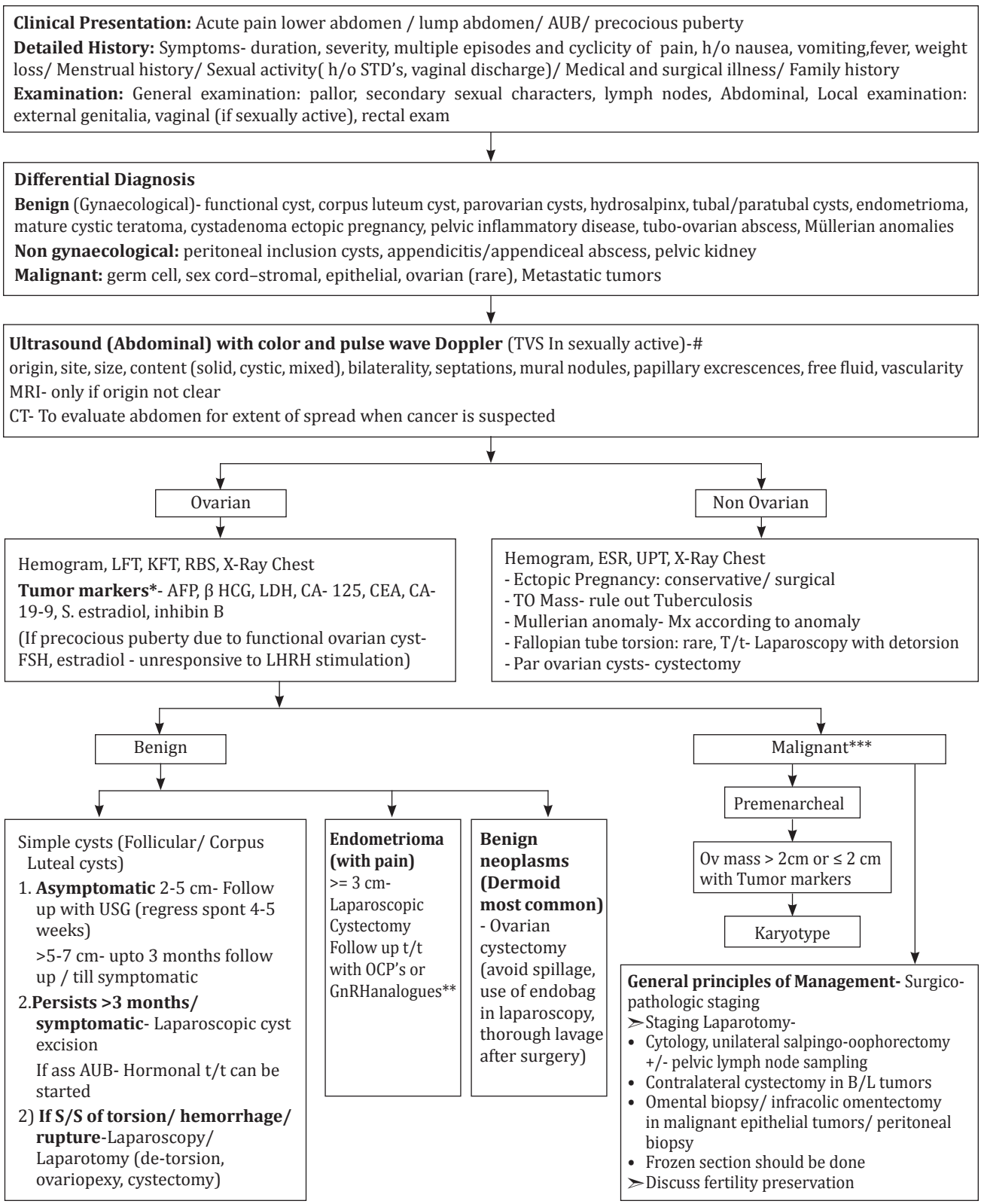

***When malignancy is detected, better managed by trained gynecologic oncologist

1) **Germ Cell tumor:**
   - ➢ *Dysgerminoma* (B/L 10-15%)- (irrespective of stage)- U/L salpingo-opherectomy (Y on karyotype →BSO with uterine preservation)+ Biopsy of suspicious lesion on contralateral ovary+ resection of metastatic disease.
   - ➢ *Immature Teratoma, Endodermal sinus tumor (EST)/ Embryonal cell carcinoma* – Staging + Fertility sparing Surgery
     Stg IA, grade 1 → Surveillance, Stg IA high grade & advanced→ BEP x 3-4 cycles
     (Except Immature Teratoma stage 1A, grade 1; Dysgerminoma Stage 1A - Chemotherapy for all stages)
   - ➢ Advanced stage- Neoadjuvant CT → Fertility sparing surgery

2) **Sex cord stromal tumor**- Juvenile GCT (less chemosensitive)
   - ➢ >90% -Stg I, Favourable prognosis
   - ➢ Stg IA - Staging with fertility sparing surgery, unilateral salpingo-oophorectomy
   - ➢ Advanced Stage - complete staging with TAH + BSO, Lymphadenectomy may be → omitted →Platinum based CT

3) **Epithelial tumors**
   - ➢ Rare- 2-5% (5-16% malignant, 40% Borderline)
   - ➢ Stg IA (all grades)- Staging + USO
     (Stg IB, IC (G 1,2) - may do fertility sparing)
   - ➢ Advanced stage- Complete staging with cytoreductive surgery
   - ➢ Stg IA Gd I- No CT, Rest all stages- Platinum based CT

4) Borderline tumor:
   - ➢ Complete Staging + USO+ omental + peritoneal biopsy →No invasive implants- Observe, Invasive implants – Observe/ CT

International Ovarian Tumor Analysis (IOTA) group

B -rules	**M- rules**
Unilocular cyst	Irregular solid tumor
Solid component < 7mm	Ascites
Acoustic shadowing	Atleast four papillary structures
Smooth multilocular <100mm	Irregular multilocular solid tumor >100mm
No Blood flow	Very Strong blood flow

Sensitiviy:95%, Specificity: 91%
Positive likelihood ratio: 10.37, Negative likelihood ratio: 0.06

***Tumor markers**

1) Dysgerminoma	LDH,
2) Endodermal sinus tumor	AFP
3) Embryonal carcinoma	β hCG, AFP
4) Immature Teratoma	AFP, LDH
5) Choriocarcinoma	β hCG
6) Juvenile Granulosa cell tumors	Inhibin B, S. Estradiol
7) Sertoli-Leydig cell tumor	S. Testosterone
8) Epithelial tumors	CA-125, CEA, CA-19.9

** careful consideration to use of GnRH agonists in young women and adolescents, since these women may not have reached maximum bone density

Suggested Reading

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Inspiring quotes from Adolescent Noble Laureate....Malala Yousafzai

"One child, one teacher, one book, one pen can change the world."

"When the whole world is silent, even one voice becomes powerful."

"If one man can destroy everything, why can't one girl change it?"

"With guns you can kill terrorists, with education you can kill terrorism"

Mullerian Anomalies: Classification simplified

Rashmi

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Congenital malformations of the female genital tract are defined as deviations from normal anatomy resulting from embryological maldevelopment of the Mullerian ducts. They represent a rather common benign condition with a prevalence of 4–7% and may result in impaired fertility, recurrent miscarriage, amenorrhoea, dysmenorrhoea and pelvic malignancy. Appropriate classification is essential to guide appropriate clinical management and prevent unnecessary procedures. Many classification systems have been proposed but the American Fertility Society's (AFS) currently American Society of Reproductive Medicine, system is widely accepted as the main classification system for almost two decades as it is simple, user-friendly and correlates well with pregnancy outcome.

Table: AFS Classification of Anomalies of the Müllerian Duct

Classification	Clinical Finding
I	Segmental or complete agenesis or hypoplasia
II	Unicornuate uterus with or without a rudimentary horn
III	Didelphys uterus
IV	Complete or partial bicornuate uterus
V	Complete or partial septate uterus
VI	Arcuate uterus
VII	DES-related abnormalities

There are however several limitations of the AFS classification system

1. The AFS system basically classifies and describes various uterine malformations and is appropriate in most of the cases. However, this classification system is not comprehensive enough to classify each and every anomaly and thus limiting the prediction of feasibility and safety of surgical correction in many such unclassified cases.
2. Another limitation of this system is that separate classification and description for associated cervical and vaginal abnormalities is not included. If a girl is having cervical or vaginal obstructive anomaly with normal functioning uterus, this can't be classified clearly in AFS system.
3. Arcuate Uterus and Septate uterus are given different classes. The clinical significance of arcuate uterus is as such not clear. Also there is debate regarding whether arcuate uteri and septate uteri should be classified separately as they represent same defect of absorption.
4. The AFS class I includes many different anomalies with totally different clinical presentation, management and outcomes. This class is considered to be too general by many clinicians.

All other proposed system of classifications too seem to be associated with serious limitations in terms of effective categorization of the anomalies, clinical usefulness, simplicity and user friendliness.

Considering the limitations of the earlier classification systems for congenital genital tract anomalies in females and the clinical significance of these anomalies, the European Society of Human Reproduction and Embryology (ESHRE) and the European Society for Gynaecological Endoscopy (ESGE), established a common working group under the name CONUTA (CONgenital UTerine Anomalies), with the goal of developing a new updated classification system. This classification system has the following general characteristics:

(i) **Anatomy is the basis** for the systematic categorization of anomalies.

(ii) Main classes are designed on the basis of **deviations of uterine anatomy having same embryological**

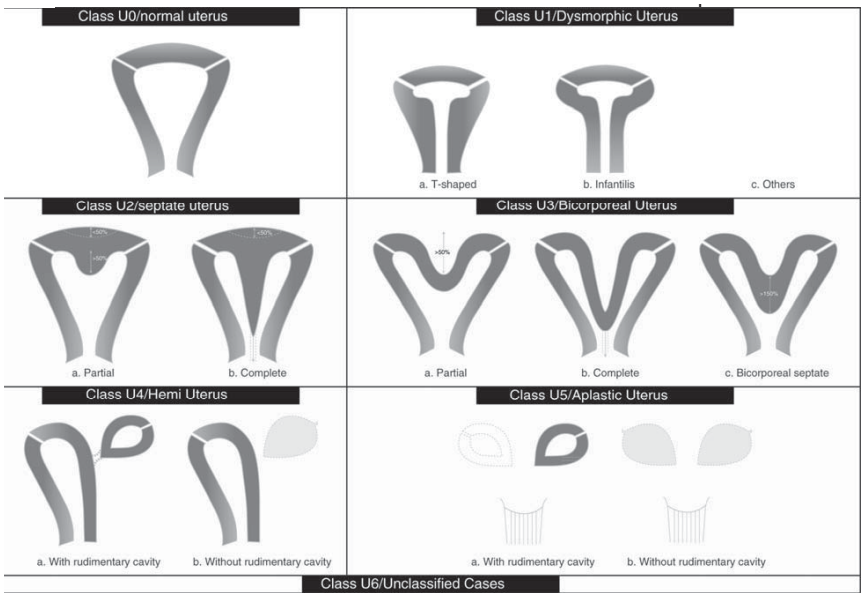


Figure 1: ESHRE/ESGE classification of uterine anomalies: schematic representation

origin. So the fusion defects or absorption defects are given different classes.

(iii) Classes are further divided into sub classes based on different degrees of anatomical defects which are **clinically significant**.

(iv) **Cervical** and **vaginal** anomalies are **classified separately** in independent supplementary sub-classes depending on the anatomical defect and the severity.

Definitions: Uterine main classes and sub-classes

- **Class U0:** It includes all cases with normal uterus. A normal uterus is any uterus having either straight or curved interostial line but without an internal indentation at the fundal midline exceeding 50% of the uterine wall thickness. The addition of normal uterus gives the opportunity to independently classify congenital malformations of the cervix and vagina
- **Class U1 or Dysmorphic uterus:** It includes all cases with normal uterine outline but with an abnormal shape of the uterine cavity excluding septate uterus.
  - o **Class U1a or T-shaped uterus** characterized thickened lateral walls and a narrow uterine cavity. The ratio of uterine corpus to the cervix is normal i.e. 2:1
  - o **Class U1b or uterus infantilis** characterized also by a narrow uterine cavity but there is no lateral wall thickening. The ratio of uterine body with cervix is reversed at 1:2 means cervix is twice the length of the uterine body.
  - o **Class U1c or others:** This subclass is added to include all minor deformities of the uterine cavity
- **Class U2 or septate uterus:** this class includes all cases in which normal fusion of mullerian ducts have occurred but the subsequent absorption of the midline septum was defective during development. Septate uterus is defined as the uterus with normal outline and an internal indentation at the fundal midline exceeding 50% of the uterine wall thickness.
  - o **Class U2a or partial** septate uterus characterized by the presence of a septum which is not completely dividing the uterine cavity. The septum ends above the internal cervical os.
  - o **Class U2b or complete septate uterus** characterized by the presence of a septum fully dividing the uterine cavity up to the level of the internal cervical os.
- **Class U3 or bicorporeal uterus:** This class includes all cases of fusion defects of the two mullerian ducts. In this class of defects there is the presence of an external indentation at the fundal midline. The indentation should be >50% of the uterine wall thickness. It is also associated with an inner indentation at the midline level that divides the cavity as happens also in the case of septate uterus. But the differentiating feature is presence of external indentation.
  - o **Class U3a or partial bicorporeal uterus** characterized by an external fundal indentation which is partly dividing the uterine cavity. The internal indentation ends above the level of the cervix. So lower part of the cavity is not divided.
  - o **Class U3b or complete bicorporeal uterus** characterized by an external fundal indentation completely dividing the uterine cavity up to the level of the cervix.
  - o **Class U3c or bicorporeal septate uterus** characterized by the presence of both fusion as well as absorption defect means in addition to bicorporeal uterus, there is a septum also. In patients with bicorporeal septate uterus (Class U3c) the width of the midline fundal indentation exceeds by 150% the uterine wall thickness. The clinical significance of this is that these patients can be partially treated by hysteroscopic resection of the septate element of the defect.
- **Class U4 or hemi-uterus:** this class includes all cases of unilaterally formed uterus. There is normal development from one mullerian duct, while either there is no development from the contralateral mullerian duct or there is partial development resulting in contralateral part being either incompletely formed or absent.
  - o **Class U4a or hemi-uterus (Unicornuate Uterus) with a rudimentary (functional) cavity** characterized by the presence of a functional contralateral horn which may be communicating or non communicating.
  - o **Class U4b or hemi-uterus (Unicornuate) without rudimentary (functional) cavity** characterized either by the complete absence of contralateral horn or the presence of rudimentary horn without functional cavity.

    The presence of a functional cavity in the contralateral part (rudimentary horn) is the only clinically important factor for complications, such as hematometra if the cavity is non communicating resulting in cryptomenorrhoea or ectopic pregnancy in the rudimentary horn which will result in rupture of the horn with hemoperitoneum. Therefore the treatment (laparoscopic removal) is always recommended if the rudimentary horn has functional cavity irrespective of the fact whether communicating or not.
- **Class U5 or aplastic uterus:** This class includes all cases in which there is uterine aplasia. It is a developmental defect characterized by the absence of any fully or unilaterally developed uterine cavity. However, in some cases there can be presence of rudimentary horn unilateral or bilateral. The rudimentary horns can be with or without cavity.
  - o **Class U5a or aplastic uterus with rudimentary (functional) cavity** characterized by the presence of bi- or unilateral functional horn,
  - o **Class U5b or aplastic uterus without rudimentary (functional) cavity** characterized either by the presence of uterine remnants or by full uterine aplasia.

The presence of a horn with cavity is clinically important and it is used as a criteria for sub-classification because it is combined with health problems (cyclic pain and/ or hematometra) necessitating treatment.

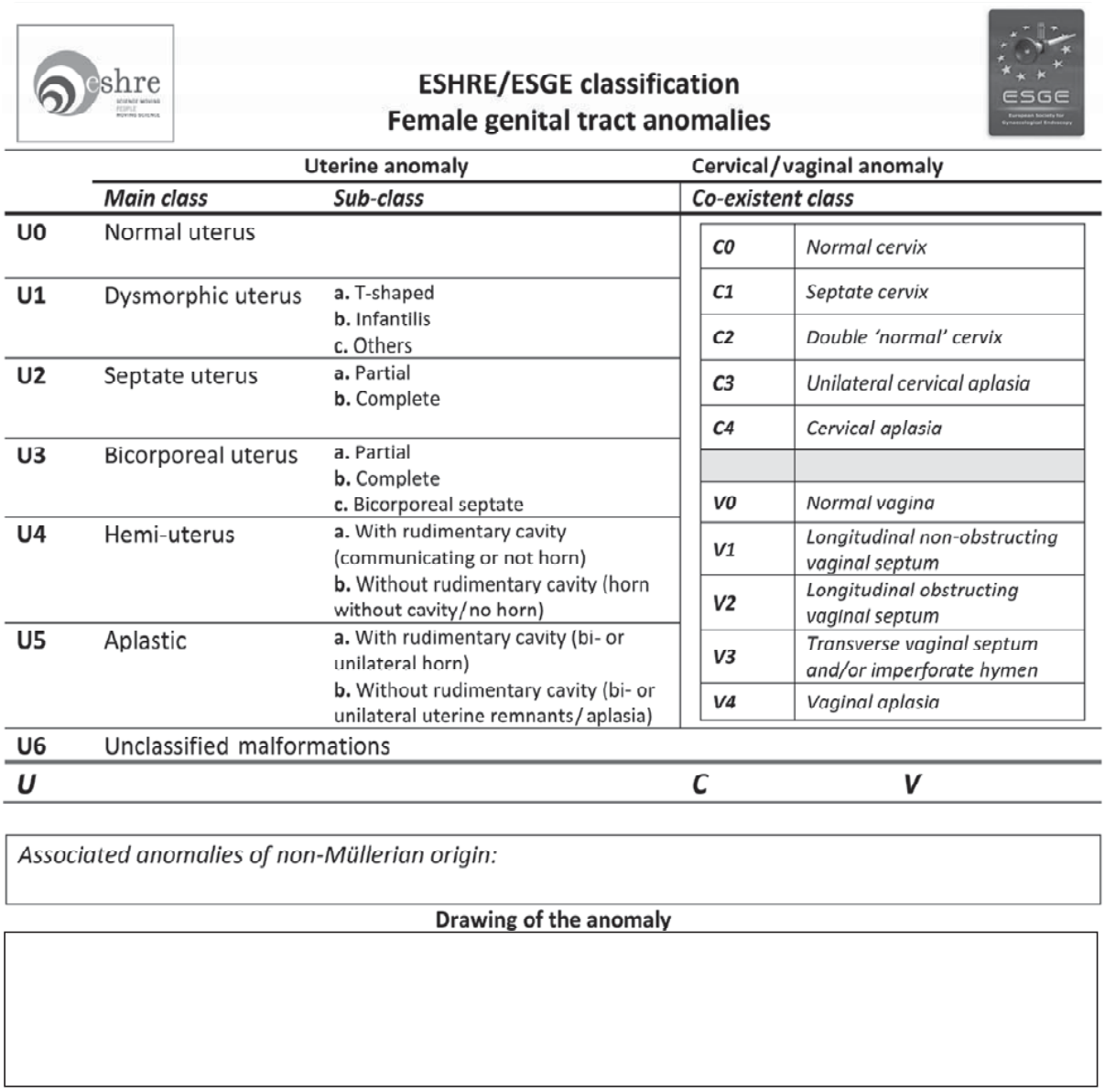
- Class U6 is kept for still **unclassified** cases.

Co-existent cervical anomalies

- **Sub-class C0 or normal cervix:** This includes all cases of normal cervical development.
- **Sub-class C1 or septate cervix:** This includes all cases of cervical absorption defects. It is characterized by the presence of a normal externally rounded cervix with the presence of a septum.
- **Sub-class C2 or double cervix:** This includes all cases of cervical fusion defects. It is characterized by the presence of two distinct externally rounded cervices; which may be either fully divided or partially fused.
- **Sub-class C3 or unilateral cervical aplasia:** This includes all cases of unilateral cervical formation that means only half of the cervix is developed.
- **Sub-class C4 or cervical aplasia:** this includes all cases of complete cervical aplasia or severe cervical formation defects. It is characterized either by the absolute absence of any cervical tissue or by the presence of severely defected cervical tissue such as cervical cord, cervical obstruction and cervical fragmentation.

Co-existent vaginal anomalies

- **Sub-class V0 or normal vagina:** This includes all cases of normal vaginal development.
- **Sub-class V1:** This includes longitudinal non-obstructing vaginal septum.
- **Sub-class V2:** This includes longitudinal obstructing vaginal septum



ESHRE/ESGE classification
Female genital tract anomalies

	Uterine anomaly		Cervical/vaginal anomaly
	Main class	*Sub-class*	*Co-existent class*
U0	Normal uterus		
U1	Dysmorphic uterus	a. T-shaped b. Infantilis c. Others	
U2	Septate uterus	a. Partial b. Complete	
U3	Bicorporeal uterus	a. Partial b. Complete c. Bicorporeal septate	
U4	Hemi-uterus	a. With rudimentary cavity (communicating or not horn) b. Without rudimentary cavity (horn without cavity/no horn)	
U5	Aplastic	a. With rudimentary cavity (bi- or unilateral horn) b. Without rudimentary cavity (bi- or unilateral uterine remnants/aplasia)	
U6	Unclassified malformations		
U			*C* *V*

C0	*Normal cervix*
C1	*Septate cervix*
C2	*Double 'normal' cervix*
C3	*Unilateral cervical aplasia*
C4	*Cervical aplasia*
V0	*Normal vagina*
V1	*Longitudinal non-obstructing vaginal septum*
V2	*Longitudinal obstructing vaginal septum*
V3	*Transverse vaginal septum and/or imperforate hymen*
V4	*Vaginal aplasia*

Associated anomalies of non-Müllerian origin:

Drawing of the anomaly

Figure 2: Scheme for the classification of female genital tract anomalies according to the new ESHRE/ESGE classification system.

- **Sub-class V3:** This includes transverse vaginal septum and/or imperforate hymen
- **Sub-class V4** or vaginal aplasia incorporates all cases of complete or partial vaginal aplasia.

Clinicians could use Fig. 2 for an easy and precise description of anomalies and they could also draw the scheme of the malformation.

Benefits of the new ESHRE/ESGE classification system

- The system seems to be **simple and functional** because it has a direct and obvious association with the anatomy of the female genital system, without using complicated tables.
- The ESHRE/ESGE classification is a **comprehensive** system and provides description and categorization of even complex and earlier unclassified cases as evaluated in a study.
- This classification system gives the opportunity to **replace inappropriate descriptions** within the AFS system. A common terminology could be adopted for communication among clinicians to convey the exact anatomical status of the female genital tract, which is the primary basic characteristic in the design of the classes and sub-classes of the system.
- An important characteristic is the **independent classification of uterine, cervical and vaginal anomalies.** So cervical and vaginal defects in the presence of normal uterus can also be classified.
- Malformations are graded **according to severity; U0-5, C0-4 and V0-4**, with U5 being the most severe i.e. aplastic uterus.
- **Class U3** incorporates "bicorporeal" fusion defects **(didelphys and bicornuate)** as this was considered a more functional mode of classification.
- **Arcuate uterus** was not included separately, but this can be categorized into **Class U1c**
- The new classification also 'promotes' the description of 'associated anomalies of non-Mullerian origin', which is so important particularly in the complex anomalies where a significant number will have associated renal tract malformations.
- Embryological origin has been adopted as the secondary basic characteristic in the design of the main classes. In fact, using this classification we could have an image of the embryological defect and, for example, such a rare anomaly as 'Robert's uterus' could be easily categorized as 'complete septate uterus with unilateral cervical aplasia' (U2bC3V0)

An **important concern** about the ESHRE/ESGE criteria is the reclassification of the **arcuate uterus** into normal (U0) or septate uterus (U2), modifying the number of diagnosed uterine septa. However, it is not known how much it is relevant in clinical practice or which rate is really associated with an unfavourable prognosis and it cannot identify the uterus that may benefit from the different endoscopic surgeries. A septate uterus generally leads to the highest incidence of reproductive complications, but surgical correction substantially improves the reproductive outcome. On the other hand, the correlation between arcuate uterus and reproductive outcome has still been debated, such as the need for surgical correction. The new classification of ESHRE/ESGE leads to increased frequency of diagnosis of a septate uterus and, subsequently, more cases will be candidate for hysteroscopic metroplasty. Further studies are needed to evaluate this classification in relation to reproductive outcome. Researchers have concluded that the ESHRE/ESGE classification leads to more frequent surgical interference and recommended not to depend on it in decisions for operative treatment till further studies are carried out to evaluate this classification. In clinical practice, new parameters and algorithms are needed for a better prediction of pregnancy.

Another criticism is the **use of myometrial thickness as a 'benchmark'** on which differentiation of many anomalies depends, being changeable due to many factors. Whether to use the absolute cutoff values (length of internal contour depression) or to refer to patient's own myometrial thickness in differentiating normal from septate and bicorporeal uterus needs further studies that should relate each to the reproductive outcome before and after metroplasty.[4]

To conclude, the new proposed system is quite descriptive and comprehensive for classifying most of the mullerian anomalies and it seems to overcome the limits of the previous attempts; however its clinical value still needs to be proved. The concern about increased surgical interventions and the defining criteria for septate uterus need to be sorted out.

Suggested Reading

1. American Fertility Society. The AFS classification of adnexal adhesions, distal tubal occlusion, tubal occlusion secondary to tubal ligation, tubal pregnancies, Mullerian anomalies and intrauterine adhesions. Fertil Steril 1988; 49: 944–955.
2. GF Grimbizis, S Gordts, ADS Sardo, S Brucker, et al. The ESHRE/ESGE consensus on the classification of female genital tract congenital anomalies. Human Reproduction 2013;28(8):2032–2044.
3. ADS Sardo, R Campo, S Gordts, et al. The comprehensiveness of the ESHRE/ ESGE classification of female genital tract congenital anomalies: a systematic review of cases not classified by the AFS system. Human Reproduction 2015;30 (5):1046–1058.
4. SM Sadek, R Ahmad, H Atia. Performance of the ESHRE/ESGE classification in differentiating anomalies of double uterine cavity in comparison with the ASRM classification. Middle East Fertility Society Journal 2016;21,75–81.

Events Held - April 2017

- Contraception Update on Medical Eligibility Criteria and Selected Practice recommendations- 2016 was organized by FOGSI, FIGO, WHO-CCR, Deptt. of Obstetrics & Gynecology, AIIMS in collaboration with AOGD and GESI on 1st April 2017 at JLN Auditorium, AIIMS, New Delhi.


- A Cervical Cancer Awareness Rally was organized by Sant Parmanand Hospital, on 2nd April 2017, in North Delhi.




- Dr. Shalini Rajaram & Dr Kiran Guleria were invited for PFI & FOGSI meeting "Joining hands towards improved family planning & women's health" on 4th April, 2017 at Le Meridian, New Delhi

- FOGSI launches a program Nari Swasthya Pahel in Delhi in association with AOGD on 5th April 2017.

- A scientific program on challenges in Modern Day Obstetrics: Focus on IOL with Dr. Tim Draycott at Hotel Lalit on 14th April, 2017.

- A hands on workshop by Safdarjung Hospital on 14th April under aegis of multidisciplinary Sub committee of AOGD conducted by Dr Tim Draycott on Obstetric skill followed by talk.




- Department of Gynae oncology, Action Cancer hospital, Paschim Vihar, Delhi organised a CME on " Current Concepts in Vulval Disorders" on 15th April 2017 attended by 120 gynecologists.

- Dr. Shalini Rajaram attended FOGSI managing committee meeting Bengaluru, 15th & 16th April 2017.

- CME on 'Letrozole in ovulation induction' by Dr. Anup Gupta on 27th April 2017 at Madhuban Chowk.

- AOGD clinical meeting at Apollo hospital, organized by Dr. Ranjana Sharma , Dr. Shakti Bhan Khanna and their team on 28th April, 2017.

- Conference on Let's Talk Sex organized by International Fertility Centre with Sexual Medicine Committee FOGSI and Infertility Committee AOGD on 30th April, 2017 at Juniper, Indian Habitat Centre, Delhi. Padamshri Dr. Prakash Kothari spoke on female sexual dysfunction.

- A National Symposium on Violence Against Medical Professionals In India was held on 29th April 2017, at IMA House, a joint initiative by Indian Medical Association & Academy of Hospital Administration India. AOGD supported the cause and Dr Himsweta Srivastava, Joint Secretary, represented AOGD as a panelist at the symposium and raised concerns and the need for effective communication to prevent violence.

FIRST ANNOUNCEMENT

Block your Dates

39th Annual Conference of Association of Obstetricians and Gynecologists, AOGD-Delhi on 18th & 19th November, 2017 at Indian Habitat Centre, Lodhi Road, New Delhi.

Conference Theme

Bridging the Gap: Taking evidence & innovation to clinical practice

Theme Topics

Improvising Surgical Techniques: Old and New, High Dependency Obstetrics, Gynecological Emergencies, Rational use of Hormones in Gynecology.

Pre-conference workshops

17th November on Infertility, Endoscopy, Fetal Medicine, Intrapartum Skills, Gynae Oncology

Forthcoming Events

- Workshop on fundamentals of Maternal Resuscitation on 6th May, 2017 organized by the Department of Obstetrics and Gynecology UCMs and GTB hospital 9.30am till 3pm. Venue: 7th Floor seminar room, MCH Block, GTB Hospital.
- CME on Interstitial cystitis and bladder pain syndrome organized by Global Interstitial cystitis/ Bladder pain syndrome society (GIBS) and endorsed by ICOG under the aegis of Urogynae subcommittee of AOGD on 6th May from 1:00pm- 5:00pm at Apollo Hospital, Sarita Vihar, New Delhi.
- CME on Menopause Management – An Executive Guide on 12th May 2017 (Friday), 12:00-5:00pm at Auditorium, Sir Ganga Ram Hospital, New Delhi.
- 1st endometriosis summit organized by Endometriosis Committee, FOGSI in association with AOGD and SIG-Endometriosis, IFS on 14th May 2017 at Silver Oak Hall IHC.
- CME on 'Antenatal care: Best practices' by Dept. of Obs and Gynae UCMS and GTB Hospital on 19th May, 2017 Venue: 7th Floor seminar room, MCH Block, GTB Hospital, 2:00pm onwards.
- Challenges in Management of Preterm Labour on 23rd July 2017 in Army Hospital by Dr. BK Goel and team.
- "BOH- The Trilogy 2017" on 19th and 20th August focused on current practices, breakthrough and current dilemmas on BOH patients by the FOFSI BOH Organizing Team, Nulife Hospital.
- 39th AOGD Annual Conference on 18th and 19th November, 2017 at Indian Habitat Centre; Pre- conference workshops on 17th November2017.

AOGD Sub-Committee Chairpersons

Congratulations to the newly elected chairpersons of AOGD sub- committees for the period 2017-19. All interested AOGD members working in the field may contact the concerned chairperson to become members of respective sub-committees.

Sub - Committee	Chairperson	Contact No.	E-mail
Urogynaecology Committee	Dr Amita Jain	9871136110	amita_jain75@yahoo.com
Adolescent Committee	Dr Shakuntala Kumar	9811445853	numesh_in@yahoo.com
Safe Motherhood Committee	Dr Ashok Kumar	9968604346	ash64kr@yahoo.com
Fetal Medicine & Genetics Committee	Dr Vatsla Dadhwal	9868397308	vatslad@hotmail.com
Oncology Committee	Dr Rupinder Sekhon	9810163076	rupysekhon@hotmail.com
Endoscopy Committee	Dr Anjali Tempe	9968604343	anjalitempe@hotmail.com
Endometriosis Committee	Dr Renu Misra	9811147217	drrenumisra@gmail.com
Reproductive Endocrinology Committee	Dr Nalini Mahajan	9810087666	nalinimahajan@hotmail.com

All AOGD members are directed to become members of only one sub-committee and not several sub-committees, as has been observed in the past, so that they can contribute meaningfully to the committee concerned.

Existing AOGD Subcommittee Chairpersons 2016 - 2018		
Sub - Committee	**Chairperson**	**E-mail**
Breast Cancer Prevention	Dr Sunita Malik	svmalik@yahoo.com
Cervical Cancer Awareness and Prevention	Dr Mala Srivastava	malasrivastava2001@yahoo.co.in
Infertility	Dr K D Nayar	kdnayar@usa.net
Rural Health	Dr Achla Batra	achla_batra@yahoo.com

Adolescent Health Programs in India: The current status

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Introduction

Adolescents (10-19 years) constitute about one fourth of India's population and young people (10-24 years) about 21% of India's population. Adolescence is a significant period for mental, emotional and psychological development. They face a range of health challenges, including malnutrition and anemia, 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.

Addressing the health needs of Adolescent Girls (AGs) leads to a healthier and more productive women force. Various adolescent health programs in India are briefly discussed here.

I. Kishori Shakti Yojna (KSY)

Kishori Shakti Yojana launched in 2000 under the ambit of Integrated Child Development Scheme, aims at empowerment and holistic development of adolescent girls by improving their self-perception and creating opportunities for realizing their full potential through Balika Mandals. Adolescent girls who are unmarried and belong to families below the poverty line and school drop-outs are attached to the local Anganwadi Centres for six-monthly learning and training activities. Total number of blocks covered under KSY are 6118 under the existing ICDS infrastructure. Financial sanction is Rs. 1.10 lakh per ICDS project per annum

It has two schemes:

a) **Girl-to girl approach**
Includes girls in 11-15 years age group with family income of Rs 6400/year & school dropouts in urban & rural areas. Three girls are selected per Anganwadi for 6 months for learning & training. In the initial 3 days, training program on personal hygiene, nutrition, preventive health is given followed by one day every month for 6 months

b) **Balika Mandal**
Includes girls from 11-18 years irrespective of income. 10% of total Anganwadi centres are selected & 20 girls are selected for 6 months. These girls are provided supplementary nutrition (500 calories + 25 gm of proteins) for 6 days in a week.

Objectives:

i. To provide the required literacy and numeric skills through the non-formal stream of education.
ii. To stimulate a desire for more social exposure and knowledge and to help them improve their decision-making capabilities.
iii. To improve the nutritional health and development status of adolescent girls, promote awareness on health, hygiene, nutrition and family care.
iv. To link them to opportunities for learning life skills, to train and equip the adolescent girls to improve/upgrade home based and vocational skills.
v. To help them gain a better understanding of their social environment and take initiatives to become productive members of the society.

II. Nutrition Programme for Adolescent Girls (NPAG)

This was initiated as a pilot project in the year 2002-03 in 51 identified districts across the country to address the problem of under-nutrition among adolescent girls. Under the program, 6 kg of free food grains per beneficiary per month are given to underweight adolescent girls between the ages of 11 -19 who are less than 35 kgs. It was taken up again as a full project, in 2005-06, to be implemented by the Ministry of Women and Child Development. The funds are provided by the central government to the state government in the form of 100% grants.

III. Rajiv Gandhi Scheme for Empowerment of Adolescent Girls (RGSEAG): SABLA

A new comprehensive scheme with richer content, merging the erstwhile two schemes (KSY and NPAG) was launched in 2010 that would address the multi-dimensional problems of AGs in age group of 11-18 years. This is implemented using the platform of ICDS Scheme through Anganwadi Centers (AWCs).

Objectives

i. Enable the AGs for self-development and empowerment
ii. Improve their nutrition and health status.
iii. Promote awareness about health, hygiene, nutrition, Adolescent Reproductive and Sexual Health (ARSH) and family and child care.
iv. Upgrade their home-based skills, life skills and tie up with National Skill Development Program (NSDP) for vocational skills
v. Mainstream out of school AGs into formal/non-formal education
vi. Provide information/guidance about existing public services such as PHC, CHC, Post Office, Bank, Police Station, etc.

An integrated package of services for AGs is as follows:

i. Nutrition provision (Supplementary nutrition (SN) containing 600 calories, 18-20 grams of protein and micronutrients, per day for 300 days in a year in the form of Take Home Ration (THR).
ii. Iron and Folic Acid (IFA) supplementation (convergence with the National Nutrition Anemia Control Program)
iii. Health check-up (Kishori Diwas) and Referral services
iv. Nutrition & Health Education (NHE)
v. Counseling/Guidance on family welfare, ARSH, child care practices and home management
vi. Life Skill Education and accessing public services
vii. Vocational training for girls aged 16 and above under National Skill Development Program (NSDP)

IV. Balika Samridhi Yojana

It was launched by Government of India in1997 for girls belonging to families below the poverty line who are born on or after 15th August, 1997. The benefits are restricted to two girls in a household irrespective of number of children in the household.

Objectives

i. To change negative family and community attitudes towards the girl child at birth and towards her mother.
ii. Improve enrollment and retention of girls in schools,
iii. Increase the age of marriage of girls and to assist the girl to undertake income generation activities.

Benefits

i. Post birth grant amount of Rs. 500/-
ii. Eligible for annual scholarships for education according to class of study
iii. Part of the money provided can be put aside for paying the premium on an insurance policy in the name of the girl child under the Bhagyashri Balika Kalyan Bima Yojna.

V. Adolescent Reproductive and Sexual Health (ARSH):

This program, launched by Ministry of Health and family welfare has provision of training of all medical officers, health supervisors and health workers under RCH to provide following services to all adolescent married and unmarried girls and boys.

i. ***Promotive services:***
- Focused care during antenatal period
- Counselling & provision of emergency and reversible contraceptives
- Information/advice on Sexual & Reproductive Health

ii. ***Preventive services:***
- Services for TT and prophylaxis against nutritional anemia
- Nutritional counselling
- Services for early and safe termination of pregnancy and management of post abortion complications

iii. ***Curative services:***
- Treatment for common RTI/STIs
- Treatment & counselling of menstrual disorders sexual concerns of males and female adolescents

iv. ***Referral services:***
- Integrated Counselling and Testing Centre
- Prevention of Parent to Child Transmission

v. ***Outreach services:***
- Periodic health checkups and community camps
- Periodic health education activities
- Co-curricular activities

VI. Adolescent Friendly Health Services (AFHS)

AFHS provides a broad range of preventive, promotive & curative services as per WHO consultation 2001 under Adolescent District Health Project. AFHS in India was first taken up by Safdarjung Hospital in New Delhi.

Objectives

i. Monitoring of growth & development and behavior problems
ii. Offer information & counselling on developmental changes, personal care

iii. Reproductive health including contraceptives, STI treatment, pregnancy care & post abortion management
iv. Integrated counselling & testing for HIV
v. Management of sexual violence
vi. Mental health services including management of substance abuse

The National Institute of Research in Reproductive Health started AFHS "**Jagruti**" in Mumbai for providing specialized sexual & reproductive services for adolescent boys & girls. "**MAMTA**", an NGO started AFHS in some villages and in four districts of Madhya Pradesh a pilot project of AFHS was launched as name "**Jigyasa**" by The Family Planning Association of India (FPAI).

The RCH-II has a strategy to provide services for adolescent health at public health facilities & at primary health care level during routine hours and on dedicated days & times. Haryana is the first state in the country to launch a distinct Adolescent Reproductive & Sexual Health (ARSH) program providing AFHS at government health facilities.

VII. Mahila Samakhya Program

The Mahila Samakhya programme was launched in 1988 to pursue the objectives of the National Policy on Education, 1986. It provides equal access to education facilities for adolescent girls and young women. It recognized that education can be an effective tool for women's empowerment, for building up and enhancing positive image, critical thinking, self-esteem and self-confidence of women.

VIII. The Adolescence Education Programme (AEP)

The AEP is one of the key policy initiatives of National AIDS Control Program-II. Relevant messages on safe sex, sexuality and relationships are developed and disseminated for youth via posters, booklets, panels and printed material.

Objectives

i. Co-curricular adolescence education in classes IX-XI and life skills education in classes I- VIII.
ii. Inclusion of HIV prevention education in pre-service and in-service teacher training and teacher education programmes and for out-of-school adolescents and young persons.
iii. Incorporating measures to prevent stigma and discrimination against learners/students and educators and life skills education into education policy for HIV prevention.

IX. YUVA- Youth Unite for Victory on AIDS

Yuva comprise of seven youth organisations, Nehru Yuva Kendra Sangathan, National Service Scheme, Indian Red Cross Society, National Cadet Corps, Bharat Scouts and Guides, Youth Hostels Association of India and the Association of Indian Universities. Nehru Yuva Kendra Sangathan act as health awareness unit-through active participation of youth. The Goal is to have an "AIDS prepared Campus, AIDS prepared Community and AIDS prepared Country"

X. Reproductive, Maternal, Newborn, Child and Adolescent Health (RMNCH+A)

It was Launched by Ministry of health and Family welfare in 2013. The priority under adolescent health include nutrition, sexual and reproductive health, mental health, addressing gender-based violence, non-communicable diseases and substance use.

Objectives (Adolescent health)

i. Reduce anemia in adolescent girls and boys (15–19 years) at annual rate of 6% from the baseline of 56% and 30%, respectively.
ii. Decrease the proportion of total fertility contributed by adolescents (15–19 years) at annual rate of 3.8% per year from the baseline of 16%.

Priority interventions

i. Adolescent nutrition; iron and folic acid supplementation (Iron ki neeli goli').
ii. Facility-based adolescent health clinics.
iii. Information and counselling on adolescent health including sexual reproductive health.
iv. Menstrual hygiene ('*Free days' sanitary napkins).*
v. Preventive health checkups.

XI. Rashtriya Kishor Swasthaya Karyakaram (RKSK)

The programme was launched 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. The objectives are to help adolescents make informed and responsible decisions relating to their health and well-being, health promotion and preventive services and counselling services.

Interventions

i. Community based interventions: Peer Education (PE), Quarterly Adolescent Health Day (AHD), Weekly Iron and Folic Acid Supplementation Programme (WIFS), Menstrual Hygiene Scheme (MHS).
ii. Facility based interventions: Strengthening of Adolescent Friendly Health Clinics (AFHC).
iii. Convergence with various existing programs within health and family welfare like NACO, National Mental Health Program etc. and other departments/ schemes like Youth Affairs and Sports
iv. Social and Behavior Change

v. Communication with focus on Inter Personal Communication

XII. Protection of Children from Sexual Offences (POCSO) Act 2012

An Act to protect children from offences of sexual assault, sexual harassment and pornography and provide for establishment of special courts for trial of such offences and for matters connected therewith or incidental thereto. This act covers children less than 18 years of age and defines punishments for sexual offences against children and adolescents below 18 years of age. There is a provision of 'mandatory reporting' of suspected foul play or notice of any such offence against the children covered under POCSO Act. As per the guidelines of medicolegal examination of a sexual assault survivor issued by ministry of health and family welfare in 2014, a child above age of 12 years can give consent for his or her medical examination.

Suggested Reading

1. Kishori Shakti Yojana, Ministry of Women and Child development, gov. of India. wcd.nic.in/kishori-shakti-yojana
2. Nutrition Programme for Adolescent Girls (NPAG)-ICDS-WCD.icds-wcd.nic.in/npag/npag.htm
3. Rajiv Gandhi Scheme for Empowerment of Adolescent Girls (RGSEAG): SABLA. wcd.nic.in/schemes/rajiv-gandhi-scheme-empowerment-adolescent-girls-rgseag-sabla
4. Balika Samriddhi Yojana by the Ministry of Women and Child development. https://india.gov.in/balika-samriddhi-yojana-ministry-women-and-child-development
5. Adolescent Reproductive and Sexual Health (ARSH). NRHM. pipnrhm-mohfw.nic.in/index_files/high_focus_non_ne/orissa/arsh.pdf.
6. Nath A, Garg S. Adolescent friendly health services in India: A need of the hour. Indian J Med Sci. 2008 Nov;62(11):465-72.
7. Mahila Samakhya Program. Ministry of Human Resource development, Gov. of India. mhrd.gov.in › School Education
8. The Adolescence Education Programme (AEP). hrd.gov.in/adolescence_programme
9. RMNCH+A - Governnment of India - National Health Mission. www.nrhm.gov.in/nrhm-components/rmnch-a.html
10. Rashtriya Kishor Swasthaya Karyakaram. nrhm.gov.in/rashtriya-kishor-swasthya-karyakram.html
11. Protection of Children from Sexual Offences (POCSO) Act 2012. http://indiacode.nic.in/amendmentacts2012/The%20Protection%20of%20Children%20From%20Sexual%20Offences%20Act.pdf

Journal Scan

Bindiya Gupta
Assistant Professor, Department of Obstetrics & Gynaecology, University College of Medical Sciences & Guru Teg Bahadur Hospital, Delhi

1. Aust N Z J Obstet Gynaecol. 2017 Mar 15. doi: 10.1111/ajo.12595.

Menstrual Management in Developmentally Delayed Adolescent Females

Chuah I, McRae A, Matthews K, Maguire AM, Steinbeck K

Background

Requests for assistance in menstrual management and menstrual suppression are a common, emotive and sometimes controversial aspect of adolescent disability care.

Aims

To review the uptake and outcomes of menstrual suppression among adolescent patients with developmental delay.

Methods

A retrospective review of the medical records of adolescent females with intellectual disability referred for menstrual management to the Paediatric and Adolescent Gynaecology Clinic, Children's Hospital at West mead, Sydney, for the three-year period between January 1, 2010 and January 1, 2013.

Results

Eighty adolescent patients with developmental delay were identified. A third (n = 28) of the patients were pre-menarcheal at first review with parent/caregivers seeking anticipatory advice. Of the post-menarcheal patients, the median age of menarche was 12 years (range 10-15 years). First and second line interventions were documented as were reasons for change where applicable. The combined oral contraceptive pill (COCP) was the most frequently used therapy (67%), and 19 patients in total had a levonorgestrel releasing intrauterine system (LNG-IUS) inserted (31%). Our study population differs from similar previously published groups in the marked absence of the use of depot medroxyprogesterone acetate or the subdermal etonogestrel releasing device.

Conclusion

As a pediatrician, it is important to address menstrual management issues and allay caregiver concerns with appropriate advice. Our study supports the use of the COCP as sound first line management in achieving menstrual suppression. The LNG-IUS appears to be a favourable second line option. Further investigation into longer-term outcomes and potential complications of device insertion is recommended.

2. J Pediatr Adolesc Gynecol. 2016;29(6):648-652.

Uterine Length in Adolescents with Developmental Disability: Are ultrasound examinations necessary before insertion of the levonorgestrel intrauterine system?

Whyte H, Pecchioli Y, Oyewumi L, Kives S, Allen LM, Kirkham YA

Study Objective

(1) To determine if there are any differences in uterine length between adolescents with developmental disability (DD) compared with their normally developing (ND) peers that might necessitate ultrasonography before insertion of levonorgestrel intrauterine system (LNG-IUS) in patients with DD; and (2) to characterize the LNG-IUS insertion procedure in adolescents with disabilities.

Design, Setting, Participants, and Interventions:

This was a retrospective cohort study of 223 female adolescents with or without DDs. Seventy-five adolescents had DD; 33 underwent intrauterine system insertion in the operating room and 42 did not. A comparative cohort of 148 ND adolescents who had pelvic ultrasound examinations for abnormal uterine bleeding were included. The study period was between January 2006 and July 2013 at the Hospital for Sick Children, Toronto, Canada. Cases were identified from surgical databases and medical records.

Main Outcome Measures

Mean uterine length on pelvic ultrasound, demographic characteristics (age, age at menarche, time from menarche to ultrasound, weight), and descriptive statistics on intrauterine system insertion.

Results

There was a statistically significant difference (P = .03)

in uterine length between adolescents with and without DD (6.7 vs 7.1 cm). However, this was not a clinically significant difference because insertion of the LNG-IUS in patients with DD was successful in patients with uteri more than 5 cm long. There was no difference (P = .97) in uterine length of adolescents with DD whether they had LNG-IUS insertion or not (6.7 cm). Adolescents with DD were younger than adolescents without DD at time of ultrasound examination (P = .01). However, among patients with DD, those who underwent intrauterine system insertion were older (P = .001). Incidence of uterine anomaly in patients with DD is low (2.7%) and was the same as in ND adolescents. Rates of complications and expulsions were low and there were no failures of LNG-IUS insertion in adolescents with DD.

Conclusion

Routine pelvic ultrasound examinations are not necessary before insertion of the LNG-IUS for menstrual suppression in adolescents with DD. Renal abnormalities, obstructive symptoms, and very small stature might necessitate imaging. Insertion using anesthesia is often straightforward and successful with minimal complications.

Editor's note

Adolescents with disabilities are more likely to have menstrual problems than the general female population. Continuous use of estrogen progestogen pills or patch is the first line option. Although, LNG IUS has been successfully used, it is advised to insert the LNG-IUS in girls with disabilities in general anesthesia. Other concern is their inability to communicate the occasional side effects of LNG IUS. Use of GnRH agonists and injectable DMPA is highly effective but may be associated with loss of bone mineral density. Invasive options like endometrial ablation and rarely hysterectomy may also be considered but may raise significant ethical issues.

Suggested Reading

1. *Kirkham YA, Ornstein MP, Aggarwal A, McQuillan S; CANPAGO COMMITTEE. Menstrual suppression in special circumstances. J Obstet Gynaecol Can. 2014; 36(10): 915-24.*

3. J Pediatr Adolesc Gynecol. 2017;30(2):239-242

The Utility of Routine Ultrasound in the Diagnosis and Management of Adolescents with Abnormal Uterine Bleeding

Pecchioli Y, Oyewumi L, Allen LM, Kives S

Study Objective

Despite the fact that most cases of abnormal uterine bleeding (AUB) in adolescence are due to an immature hypothalamic-pituitary-ovarian (HPO) axis, the current approach to investigating adolescents who present with AUB often includes pelvic ultrasound to exclude rare structural causes. The aim of this study was to determine whether an ultrasound ordered for the investigation of AUB in adolescents detects any significant anatomic pathology or alters diagnosis and management.

Design, Setting, Participants, and Interventions:

A retrospective chart review of 230 patients younger than 18 years of age who presented with AUB to the gynecology clinic at the Hospital for Sick Children in Toronto, Canada between January 2010 and December 2012 was completed.

Main Outcome Measures

Findings on pelvic ultrasound and any further imaging as well as management choices for these patients were examined.

Results

Of all patients, 67.8% (156/230) had ultrasound done as part of their AUB workup. The most common diagnosis for the patients who received ultrasound examinations and the patients who did not was AUB due to an immature HPO axis. Of the patients who received an ultrasound examination, 72.4% (113/156) had normal findings; incidental findings were identified in 17.9% (28/156) and polycystic ovary syndrome morphology in 6.4% (10/156). Structural causes of AUB were found in only 2 (1.3%) of the adolescents imaged. No patient had a change in her AUB management plan because of ultrasound findings.

Conclusion

Our results strongly suggest that pelvic ultrasound examination is not required in the initial investigation of AUB in the adolescent population because it did not alter treatment in any of our patients.

Editor's note

Normal menstrual cycles are regarded as a surrogate indicator of overall adolescent health. The PALM-COEIN classification is more suitable for reproductive age group. For adolescent girls, the common etiologies of AUB are nonstructural, commonest being anovulation due to the immaturity of the hypothalamic-pituitary-ovarian axis, bleeding dyscrasias (20%), PCOS, pregnancy, medications and sexually transmitted infections. A detailed history and physical examination is the first step in evaluation.[1]

A tiered approach for evaluation of HMB is recommended. First tier includes a pregnancy test, complete blood cell count and coagulation studies. Second-tier laboratory testing includes testing for sexually transmitted infections

for sexually active girls, investigations for PCOS and thyroid if clinical signs and symptoms are present, and testing for von Willebrand disease if clinical presentation is suggestive. Third tier testing includes specialized hematological investigations and imaging. Endometrial polyps and leiomyomas are exceedingly rare in adolescence, and HMB associated with pelvic mass and/or pelvic pain usually require an ultrasound assessment. PCOS can also be diagnosed based on anovulation, hyperadrogenism and supported laboratory investigations.

Suggested Reading

1. *Bennett AR, Gray SH: What to do when she's bleeding through: the recognition, evaluation, and management of abnormal uterine bleeding in adolescents. Curr Opin Pediatr 2014; 26:413*
2. *Mullins TL, Miller RJ, Mullins ES: Evaluation and management of adolescents with abnormal uterine bleeding. Pediatr Ann 2015; 44(9):e218-22.*

Laugh your Stress Away

Compiled by Dr Rashmi
University College of Medical Sciences & Guru Teg Bahadur Hospital, Delhi

The best blush to use is laughter: It puts roses in your cheeks and in your soul. – Linda Knight

Dr: Your case is quite complicated.
Patient: Why doctor? What happened?
Dr: You got a disease from the chapter which I left as optional during my studies...

*****

Generic drugs in India...
Dr prescribed inj Vit. B12 .
Chemist had only Vit B6. . . . .
so gave 2 inj of Vit B6 with instruction to pt . . Two inj of B6 given together will equal to B12.

*****

Question: Why does it take more than a million sperms to Fertilize one Egg?
Philosopher: Two reasons
1) Female Ego...
Rejection without Reason!
2) Male Ego...
Won't Ask For Directions !

*****

Humorous description of seven stages of Life.
1) 0-5 yrs we experience many "SPILLS" ..
2) 6-16 yrs we undergo many "DRILLS" ..
3) 17-25 yrs we discover many "THRILLS" ..
4) 26-40 yrs we have to pay many "BILLS" ..
5) 41-60 yrs we suffer many "ILLS" ..
6) 61-75 yrs we take many "PILLS" ..
7) 76 yrs. & above we worry abt our "WILLS" ....
8) Thereafter we remain / smile in STILLS !!!!!!
Smart answers….

*****

Q: Why did the doctor tell the nurse to walk past the pill cupboard quietly?
A: So she wouldn't wake the sleeping pills.

Patient: 'Doctor, my hair keeps falling out. Have you got anything to keep it in?'
Doctor: 'What about a cardboard box?'

Q: Does an apple a day keep the doctor away?
A: Only if you aim it well enough.

Patient: 'Doctor, I've swallowed a spoon.'
Doctor: 'Sit down and don't stir.'

Q: What's the difference between a general practitioner and a specialist?
A: One treats what you have, the other thinks you have what he treats.

Patient: 'Doctor, doctor, will I be able to play the violin after the operation?'
Doctor: 'Yes, of course…'
Patient: 'Great! I never could before!'

*****

Thought to ponder
Speed of sound is really funny. Our parents tell us something when we are 14+. But we hear and understand it when we are 40+

*****

Absolutely undisputable evidence of contraceptive (IUD) failure

Body, Mind & Soul

Yoga and PCOS

Jyoti
Yoga and Naturopathy Physician, Department of Physiology
University College of Medical Sciences & Guru Teg Bahadur Hospital, Delhi

Polycystic ovarian syndrome (PCOS) is common in women of reproductive age caused by hormonal imbalance. Many small cysts are formed in the ovaries affecting the hormones and disrupting the normal menstrual cycle. There is an increase in androgens, increased insulin resistance and decreased levels of progesterone.

Benefits of Yoga in case of PCOS

The science of Yoga works at much subtler and deeper levels than just the physical. Yoga treats body, mind and spirit as one single entity.

1- **Yoga relieves stress**- Yoga practices relieve stress. Yoga reduces the levels of stress hormones like cortisol which are responsible for increasing the levels of androgens in PCOS. Increased levels of testosterone are responsible for weight gain in patients.

2- **Yoga builds up muscles**- Holding weight bearing poses helps to build up muscles, increased muscle mass which helps to combat insulin resistance.

3- **Yoga promotes weight loss**- Yoga promotes physical activity and increases calorie burn up in the body by pumping up the metabolism.

4- **Yoga provides hormonal balance**- Yoga works on adreno-pituitary axis and provides hormonal balance.

5- **Yoga stimulates ovarian function**- Bhujangasana, Vipareet naukasana, Dhanurasana creates stretching effect on abdomen and helps to stimulate ovarian function.

Diet also plays an important role in the management of PCOS. Amla+ beetroot+ carrot juice therapy is very good in case of PCOS. This juice contains lot of antioxidants that neutralize the free radicals present in the body.

The most common Yoga practices beneficial for PCOS are shown in Figure 1.

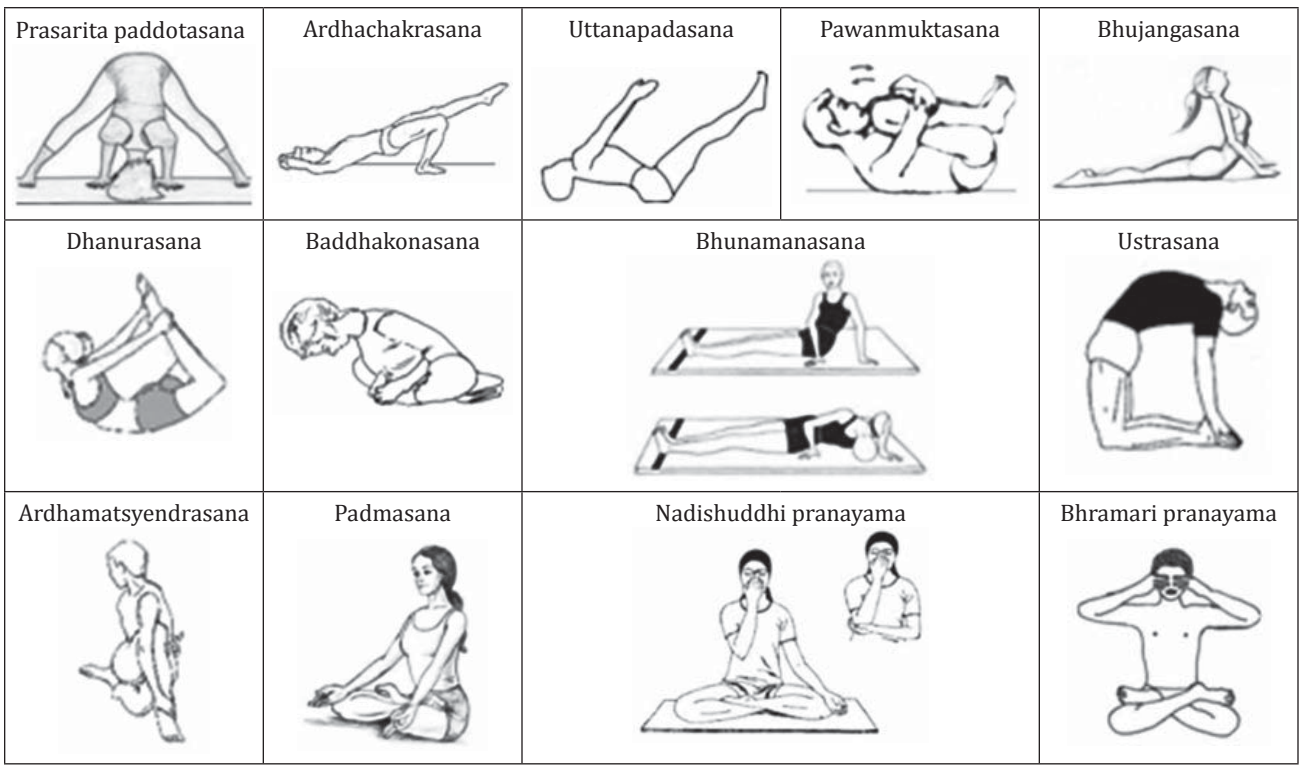

Figure 1: Asanas for PCOS

Body Dysmorphic Disorder – Early recognition and intervention

Shruti Srivastava
Professor, Department of Psychiatry, University College of Medical Sciences & Guru Teg Bahadur Hospital, Delhi

Body dysmorphic disorder (BDD) is characterized by preoccupation with concerns related to physical appearance which are otherwise trivial but the sufferer's perception is a major concern. The sufferer's daily functioning is hampered because of these preoccupations and the individual is not able to focus on their work or occupation. The individual avoids social contacts or very often starts living a socially isolated life. The bodily defects though minor, are often cited by the clients as the main reason for their inability to attend any social gathering. The diagnostic criteria of Body dysmorphic disorder is given in table -1.

The **prevalence** of BDD in a community based population study from United States of America in women aged 36 to 44 years was reported to be 0.7%. The prevalence figures reported in general population varies from 1-2%. Dermatology and plastic surgery departments report higher prevalence figures. BDD **begins** in the **adolescent** age group. This disorder often remains unrecognized and untreated. No population based study from India has been published so far to the best of the knowledge of authors. A cross-sectional study from two urban Indian cities on adolescent girls showed that unhealthy eating habits were associated with overweight girls. Few published case reports from India cited how this chronic condition often remains undiagnosed and untreated. The patients suffering from BDD as well as their caregivers are not aware of this condition and may be found to consult a dermatologist or a gynecologist who are also likely to miss the case in their first visit. The patients are often unconvinced by the reassurances or placebo medications offered to them. They frequently visit other clinical setups. Referred cases mostly visit psychiatric outpatient clinic where they are managed for their core problem.

The **clinical presentation** of this condition often points to one or more body parts like skin (rash/line/scar/acne etc.), hair (color/thinning/growth etc), muscular parts, nose (Thick/disfigured/puckered/ugly/misshaped), facial flaws, breasts, calves, etc. The key feature which helps to recognize the disorder early is often expressed by the family members/caregivers/friends/peers who report it to be a trivial issue but the sufferer does not think so and the imagined defects preoccupy most of her time, thus hamper the individual's daily functioning.

The **clinical diagnosis** of BDD is based on the current criteria as per DSM-5. Table 1 has outlined the clinical criteria necessary for the diagnosis of BDD. Psychiatric evaluation involves detailed psychiatric history taking, physical and mental state examination. There are few rating scales that are available for screening BDD such as BDD-YBOCS scale.

Table 1: The diagnostic criteria of Body dysmorphic disorder (DSM-5)

1. Preoccupations those are perceived as defects in physical appearance
2. Associated with repetitive tasks or mental acts
3. Impairment in social and occupational functioning
4. Exclude eating disorder

Etiology and Comorbidity

BDD is often closely associated with Obsessive Compulsive Disorder. The repetitive, intrusive thoughts and mental acts that are recognized as irrational, yet the sufferer is unable to get rid of them. There is evidence from genetic studies that Obsessive compulsive disorder is associated with Body dysmorphic disorder. Depressive and anxiety disorders are also closely associated with BDD, thus etiologically linked to these disorders. Sometimes, the preoccupations tend to become delusional and the individual lacks insight, thus taking psychotic proportions.

Differential Diagnosis

Normal appearance –Adolescents are often undergoing physical spurts associated with puberty. The conscious efforts by adolescents and or caregivers to not to indulge in unhealthy eating or sedentary practices should not be confused with the disease entity. Another differentiating point is that the normal appearance doesn't hamper social /work related performance of the individual.

Eating disorder – is often found to be r**elated to body fat.** Two conditions are described in this category mainly[1] Anorexia Nervosa, a misnomer, characterized by restriction of intake leading to thin, emaciated, but the sufferer does not consider it to be a problem. Bulimia nervosa – Binge eating is associated with compensatory behaviors such as vomiting (self induced) and purging.

The other psychiatric conditions like **Depressive Disorder**, **Anxiety Disorders**, **Psychosis** have typical

symptoms and signs associated with these conditions that help to differentiate them from BDD.

Course

BDD often runs a chronic course. It often remains unrecognized and associated with considerable morbidity.

Management

There are no special investigations required to make clinical diagnosis. Careful psychiatric history taking, both physical and mental state examination by qualified psychiatrist using standard diagnostic criteria is sufficient to make a diagnosis. Rating scales are available for screening the population in community setting. Evidence supports the use of SSRIs such as fluoxetine, fluvoxamine, escitalopram, and citalopram in the treatment of BDD. The tricyclic antidepressant (TCA) clomipramine has been widely used as well. In a study comparing clomipramine with the selective norepinephrine reuptake inhibitor desipramine in patients with BDD, superior results were noted with clomipramine, including improvements in obsessive characteristics, depression, insight, social performance, and disorder severity. Selective Serotonin Reuptake Inhibitors are useful for the management of associated co-morbidity like Obsessive Compulsive Disorder, Depression and anxiety disorders requiring titration of doses on the individual basis. Cognitive Behavior therapy aims at identifying the dysfunctional beliefs, exposure, desensitization techniques, imagery, self confrontation, response prevention are the principles of CBT. Given that more than 90% of BDD patients report symptoms that are unchanged and often exacerbated after surgical procedures, plastic or cosmetic surgery intended to correct the perceived defect in BDD is contraindicated. Involvement of family members/caregivers in the treatment plan helps to provide support to the sufferer as well improve compliance of the patient.

Suggested Reading

1. Sadock BJ, Sadock VA, Ruiz P. 9th ed. Comprehensive Textbook of Psychiatry. Philadelphia, PA: Wolters Kluwer; 2009.
2. American Psychiatric Association: Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition. Arlington, V A, American Psychiatric Association, 2013.
3. Som N, Mukhopadhyay S. Body weight and body shape concerns and related behaviours among Indian urban adolescent girls. Public Health Nutr. 2015 Apr; 18(6):1075-83.
4. Mufaddel A, Osman OT, Almugaddam F, Jafferany M. A review of body dysmorphic disorder and its presentation in different clinical settings. Prim Care Companion CNS Disord. 2013;15(4). pii: PCC.12r01464. doi: 10.4088/PCC.

नये ज़माने की रानी

किलकारियों से गूँज उठा आँगन
हुआ जब नवशिशु का आगमन
किंतु पलक झपकते उदासी छाई
लड़का नहीं इस बार लड़की थी आई
ठुमक ठुमक राधा सी रानी
धीरे धीरे हो गयी सयानी
रोक टोक बंधन ने घेरा
लगने लगे अब कौन है मेरा
मुझे न कोई गले लगाता
बात है क्या समझ नहीं आता
अस्तित्व ने फिर उसे झटकारा
तू खुद ही बन अब अपना सहारा
कर मेहनत सुधारा फिर जीवन
होने लगे पूरे नव स्वप्न
कुछ कर दिखाने की थी प्यास
हर क्षण हौसला उसके संग साथ
कंधा मिलाकर चली युवकों के साथ
वो किसी से कम नहीं है पक्की ये बात
चाहे हो पढ़ाई कुश्ती या कबड्डी का मैदान
कर देगी चारों खाने चित रखना यह याद
नहीं अबला जिसकी व्यथा पुरानी
ये तो है नये जमाने की रानी

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Drug Prescription: Hirsutism

Neerja Goel
Professor & Academic Head, Department of Obstetrics and Gynecology, Sharda University, Greater Noida, Uttar Pradesh

1. **Hirsutism in PCOS with menstrual irregularity**
   - **Conventional Oral Contraceptive Pill (Low Dose)**
     Ethinyl estradiol 30 µg + Levonorgestrel 150 µg
   - **Pills with Newer Progestogens**
     Ethinyl estradiol 30 µg + Desogestrel 150 µg
   - **Very Low dose OCP**
     Ethinyl estradiol 20 µg + Desogestrel 150 µg 1 tab. daily for 21 days followed by 7 days off. Pill can be started on any day within first five days of cycle.
2. **Hirsutism in PCOS with raised testosterone (>0.9 ng/ml)**
   Combined OCP with Antiandrogenic progestogen
   Ethinyl estradiol 35 µg + Cyproterone acetate 2 mg
   Ethinyl estradiol 30 µg + Drospirenone 3 mg
   1 tab. daily for 21 days followed by 7 days off.
3. **Hirsutism with normal testosterone but suspected increased receptor activity with normal menstrual cycle (Idiopathic Hirsutism)**
   - Spironolactone 50mg twice daily (can be increased to 100mg bd) for 3-6 months
   - If Sexually active, combine with non androgenic OCP
   - Spironolactone can be added if no response to OCPs after 6 months therapy in situation 1&2.
4. **Finasteride (5αR inhibitor)** 5 mg daily should be considered as monotherapy or additional therapy when prior therapy with OCPs and SPA are relatively ineffective for severe hirsutism
5. **Hirsutism due to increased androgen production from the adrenals** such as congenital adrenal hyperplasia the treatment is glucocorticoids
   0.5-1 mg of dexamethasone daily for 3-6 months.
6. **Flutamide 250mg per day** (Max 750 mg per day) can be added in resistant cases. Liver function tests should be monitored as this is hepatotoxic.
7. **In PCOS with hyperinsulinemia/ Glucose intolerance**
   Metformin – 500-2000 mg/day is used to lower androgen
8. **Topical treatment Eflornithine hydrochloride 13.9%** a topical preparation can be used alone or in conjunction with other therapies

Lifestyle modifications (e.g., diet, exercise, behavioral changes, or combined treatments) including weight loss in overweight adolescents and smoking cessation in smokers

In obese women with PCOS, weight loss programmes are the first line of intervention, to include a low calorie diet and an exercise schedule over a period of at least 6 months

Nonpharmacologic methods

Temporary methods such as shaving, plucking, or waxing are effective, safe, and inexpensive. They can be used alone or in combination with pharmacologic therapy.

Permanent methods include photoepilation (laser or intense pulsed light) or electrolysis.

Concomitant treatment with medical therapy is recommended along with cosmetic methods as hair growth recurrence occurs even with permanent methods

Investigations

- Serum Testosterone :Free and total
- Dehydroepiandrosterone sulfate (DHEAS)
- 17 Hydroxy progesterone
- In PCOS: OGTT, LH/FSH
- TSH, Prolactin
- Ultasound in PCOS patients and to rule out ovarian / adrenal tumors if rapidly developing hirsutism with virilization or S testosterone > 150 ng/dl
- ACTH stimulation test in cases of mildly increased DHEAS levels between 300 and 1,000 ng/dl
- Twenty four hour urine free cortisol : in women with signs and symptoms of Cushing's syndrome.

Proceedings of AOGD Monthly Clinical Meet

Monthly Clinical Meet of AOGD was held at Indraprastha Apollo Hospital, Sarita Vihar on 28th April,2017
Following interesting cases were discussed

Case of morbidly adherent placenta with placenta praevia with spontaneous scar rupture in second trimester

Sushma Sinha, Pragati Prakash

- Uterine rupture is a life threatening complication in a pregnancy with incidence of 0.3% in previous lower segment caesarean section and 1.2% in upper segment caesarean section. Incidence of spontaneous rupture of scar is more near the term and very rare in second trimester. Incidence of morbidly adherent placenta is as high as 1 per 2500 deliveries which is mainly attributed to the increase in caesarean deliveries and has increased 10 folds in past 50 years .The incidence of morbidly adherent placenta increases from 0.04% in a woman with no previous caesarean section to more than 67% in a woman with previous 3 caesarean sections.
- Incidence of uterine rupture with placenta accreta is very rare with incidence of approximately 1 per 4366 pregnant women. Placenta accreta induced spontaneous scar rupture is uncommon and difficult to diagnose.
- 32yr-old-lady, G2P1L1, with 25 weeks gestation with previous cesarean for breech presentation, 5 yrs back presented to the emergency with diffuse abdominal pain and nausea since 4 hrs. She also complained of spotting PV for past few days.
- She was a booked case referred here at 13 weeks gestation with a diagnosis of placenta praevia accreta made outside.
- On examination, Pulse-68/min, BP- 100/60mmHg, SPo2- 99%, Mild pallor+. Abdomen soft and nontender, uterus 24wk, relaxed, FHS + regular by doppler.USG done in fetal medicine department suggested 25 weeks pregnancy with normal growth and AFI with placenta accreta but intact scar. She was advised admission but refused, when patient got up to leave after around 2 hrs she collapsed. On examination HR-120/min,BP-70/40mmHg,SPO2-96% and patient became drowsy and confused. Abdomen was distended.
- Urgent repeat USG revealed mild to moderate ascites? hemoperitoneum with 25 weeks live fetus with intact scar.USG guided tap was done and was bloody. Surgical opinion taken and patient taken up for emergency laparotomy by surgeon.
- Intraoperatively – 2 litres of blood clots removed from peritoneal cavity , there was partial rupture of previous scar with placenta partially out with severe bleeding from the uterus and the base of the bladder. Fetus seen inside uterine cavity, not alive and was delivered out. Subtotal hysterectomy with bladder base hemostasis secured. Intra-abdominal drain kept and patient was transferred to surgical ICU for further observation.
- 6 hours later patient developed hypotention, tachycardia and was started on inotropic support. Collection of 100ml blood and 100ml serosanguinous discahrge was present in drain. Urgent USG showed hemoperitoneum. Patient was taken for re-exploration.

Approx 1000ml of blood clots removed, generalized oozing from bladder base at site of sutures, without bleeding from stumps. Vascular surgery team were called. Hemostasis was achieved. Abdomen closed after placing new drain, patient transferred to surgical ICU. During whole course 16units PRC, 12 FFP, 8 platelets and 4 units cryoprecipitate were given. Patient was hemodynamically stable after that, she recovered well and discharged

An Interesting Case of Acute Abdomen with Uterine Torsion

Geeta Chadha, Sukriti Katyal

A 27 year old unmarried girl (sexually active) presented to the emergency at Apollo Hospital with complaint of abdominal pain, vomiting and breathlessness for 3 days and decreased urine output for 2 days. She was diagnosed with ?perforation peritonitis in another hospital and managed conservatively for 2 days and was referred to Apollo in view of worsening condition on high inotropic support. Her LMP was 2 days back.

UPT was negative. USG showed mass in front of uterus with minimal ascites. NCCT abdomen showed bilateral pleural effusion with mild ascites and bulky uterus. MRI could not be done due to worsening condition.

Patient was taken up for Emergency Laparoscopy which showed bulky uterus with large subserosal fibroid on anterior wall, 10 cm in size along with torsion of uterus and fibroid, 90 degrees towards right. Detorsion tried but uterus kept reverting back. Hence, decision for laparotomy taken. Findings confirmed on laparotomy,

detorsion and myomectomy done and left round ligament plication done. HPE confirmed Leiomyoma.

Torsion of the uterus is rotation of uterus > 45 degrees, with most cases involving the gravid uterus. Preoperative diagnosis is difficult, varying from non specific abdominal discomfort to acute abdomen. Management is laparotomy with hysterectomy in long standing cases and necrosis.

A unique case of multifetal pregnancy reduction (MFPR)

Chanchal Singh, Anita Kaul

A 34-year-old Primi gravida was referred to Apollo Centre for Fetal Medicine at 12 weeks and 2 days in view of Monochorionic triamniotic (MCTA) triplet pregnancy. She was undergoing treatment for primary infertility and had conceived on ovulation induction. The options of expectant management, multifetal reduction as well as termination of pregnancy were discussed with the couple. The couple opted for multifetal reduction. Preoperative workup included ultrasound for aneuploidy screening, structural survey and cervical length. A high vaginal swab was taken prior to transvaginal ultrasound. An informed consent explaining the 5% risk of procedure related miscarriage for each fetus reduced. Intrafetal laser is associated with another 50% risk of intrauterine fetal demise of the remaining fetus over the 2 weeks following the procedure.[1] The decision was to reduce the triplets to singleton owing to the 10-15% risk of twin-twin transfusion syndrome (TTTS) or selective fetal growth reduction (sFGR) in monochorionic twins. Interstitial laser of the intrafetal pelvic vessels of 2 fetuses was done using an 18G Cook's needle under local anaesthesia and ultrasound guidance. The patient stood the procedure well. Anomaly scan at 18 weeks showed single live fetus with no obvious structural defects. She was noted to have fetal growth restriction at 28 weeks and was followed up with serial growth scans. An elective LSCS was done at 37 weeks and 5 days in view of FGR with impaired Dopplers. A baby girl weighing 2400 grams with an Apgar of 9,9 was born and is doing well at 6 weeks of age.

MFPR in monochorionic pregnancies presents a unique dilemma due to the vascular anastomoses between the fetuses. Thus, the usual method for MFPR, ie, intracardiac/ intrathoracic instillation of KCL in the fetus to be reduced that is employed in trichorionic triplets is not applicable to monochorionic triplets. Data from reduction of dichorionic (DCTA) triplets to dichorionic (DCDA) twins shows that intrafetal laser in the first trimester is a feasible and reasonable alternative for management of these complicated pregnancies[1] which would otherwise have a high perinatal morbidity and mortality.

Suggested Reading

1. Chaveeva P, Kosinski P, Birdir C, OroszL, Nicolaides KH. Embryo reduction in dichorionic triplets to dichorionic twins by intrafetal laser. Fetal Diag Ther 2014;35(2):83-6.

AOGD: Calendar of Skill Workshops

April 2017 - March 2018

AOGD & The Department of Obstetrics and Gynecology, UCMS & GTBH plan to hold skill workshop series in the year April 2017 to March 2018 in the first week of every alternate months. Exact date would be notified in consultation with the resource faculty

Proposed Workshops

1. Maternal Resuscitation - May 2017 (over)
2. Basic techniques in Laparoscopy & Hysteroscopy 3rd week of July
3. Resuscitation of the Neonate
4. Techniques for control of PPH (including Bakri Balloon demonstration & internal iliac artery ligation)
5. Interpreting the CTG : Practical aspects
6. Basics of Evidence Based Health Care including Medico-legal aspects in Obstetrics, Gynecology & Family Planning

Contact :

Skill Workshops Chairperson: Dr A G Radhika 9868399726
Skill Workshops Co-Chairperson: Dr Richa Sharma 9868399747

Applications are also invited from interested individuals/ Institutions to conduct skill workshops on any of the above-mentioned subjects and/or Ultrasonography, Uro-Gynaecology, Colposcopy and any other skill the practicing gynecologist should acquire.

Quiz Time: *Tick it, Fill it, Click it, Whatsapp/ Email it*

Rashmi, Bindiya Gupta

Asstt Professor, Department of Obstetrics & Gynecology, University College of Medical Sciences & Guru Teg Bahadur Hospital, Delhi

Q1. What is the current first line contraceptive method recommended in adolescents?

A. Combined Oral Contraceptive Pill
B. LNG IUS
C. Condoms
D. Depomedroxyprogestrone acetate

Q2. All are true about IUD insertion in adolescents except

A. Increased pain during insertion
B. More expulsion rate
C. Increased risk of PID and subsequent Tubal factor infertility
D. IUD can be inserted as emergency contraception

Q3. What is incorrect about contraception in adolescents?

A. DMPA is contraindicated in obese adolescents
B. Easy availability of emergency contraception increases unsafe sexual behavior in adolescents
C. IUD insertion increases risk of PID if cervical culture is positive for chlamydia culture
D. LARC methods can be provided immediate post abortal

Q 4. All can be given as first line therapy for Hirsutism in adolescents except

A. Low Dose Combined Oral Contraceptive Pill
B. Spironolactone
C. Flutamide
D. Metformin if Deranged OGTT

Q5. Body Dysmorphic disorders can have all of these except

A. Preoccupation with perceived defects in physical appearance
B. Repetitive tasks or mental acts
C. Eating Disorder (Anorexia/ Bulimia)
D. Social isolation

Q6. General order for normal puberty:

A. Thelarche, Adrenarche, Adolescent growth spurt, menstruation
B. Adolescent Growth spurt, thelarche, adrenarche, mensturation
C. Adrenarche, mensturation, thelarche, Adolescent growth spurt
D. Thelarche, Adolescent growth spurt, adrenarche, mensturation

Q7. According to a committee opinion from the American College of Obstetricians and Gynecologists, what is incorrect about normal menstruation in adolescents

A. Occurs between 9 and 12 years of age
B. The normal cycle length is 21–45 days
C. Length of the period is 7 days or less
D. Amenorrhea is defined as absent menses for 2 months

Q.8 15 yr premenarchal girl presented with abdominal pain and Lump abdomen with tenderness and guarding. Abdominal sonography shows bilateral solid adnexal masses each 10cm x 10cm in size. hCG level is 62 and LDH is 637. What is the most likely diagnosis?

A. Endodermal sinus tumor
B. Immature teratoma
C. Dysgerminoma
D. Theca-lutein cyst
E. Mature cystic teratoma

Q 9. Following Asanas are beneficial in PCOS except

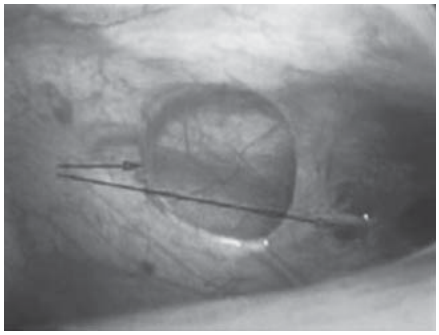
A. Dhanurasana
B. Ustrasana
C. Bhramari Prananyam
D. Sarvangasana

Q 10. YUVA comprises of seven youth organizations. What is the full form of YUVA.

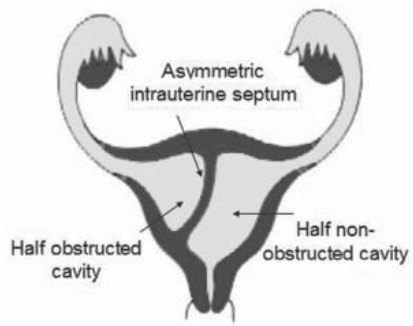
.....

.....

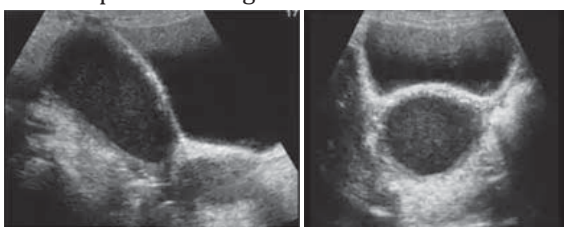
Q11. This Laparoscopic finding in an adolescent girl with pain abdomen is known as …….. ….. And the probable diagnosis is……..



Q12. The congenital abnormality in the following diagram can be classified as ……. as per ESHRE classification and this is known as …….. uterus.



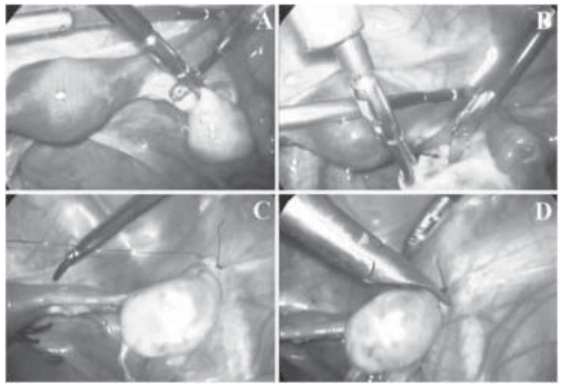
Q13. 14 years old girl, not achieved menarche, presents with cyclic pain abdomen for 3 months. Sec sexual characters are well developed. On local examination there is 1 cm retrohymenal space. On P/R, there is a midline mass of 8 weeks gravid uterus size, 6 cm from the anal opening. After USG the probable diagnosis is…….



Q 14. 19 year old girl presented with history of pain in abdomen with normal menstruation. Clinically, her abdomen was uniformly distended up to 34 weeks' size. The serum CA-125 (36.70 IU/mL) was mildly elevated, whereas alpha fetoprotein (0.74 ng/mL) and lactic dehydrogenase (176 IU/mL) were normal. The probable preop diagnosis with this USG finding is…….

Q15. A young girl with pain abdomen and tender abdomino pelvic lump. Plain X ray abdomen & pelvis is suggestive of……..

Q16. The procedure being done in this laparoscopic picture is……



Tick the MCQs & fill in the blanks, take a picture and whatsapp or email to us. Name of first five winners will be published in next bulletin.

Whatsapp Nos.: 9810645212, 9810719002
Email: rashmi.malik2011@gmail.com, dr_bindiya_gupta@yahoo.co.in

IMPORTANT DAY OF THE MONTH

Menstrual Hygiene Day (28th May)

Richa Aggarwal, University College of Medical Sciences & Guru Teg Bahadur Hospital, Delhi

Menstruation is a normal biological process and a key sign of reproductive health, yet in many cultures it is treated as something negative, shameful or dirty. The continued silence around menstruation combined with limited access to information at home and in schools results in millions of women and girls having very little knowledge about what is happening to their bodies when they menstruate and how to deal with it. A study from UNICEF revealed that 1 out of 3 girls in South Asia knew nothing about menstruation prior to getting it while 48% of girls in Iran and 10% of girls in India believe that menstruation is a disease

In addition to persisting taboos, women and girls' capacity to manage their periods is affected by several other factors, including limited access to affordable and hygienic sanitary materials and disposal options leaving many to manage their periods in ineffective, uncomfortable and unhygienic ways. In some contexts, natural materials such as mud, leaves, dung or animal skins are used to manage the menstrual flow (UNESCO 2013, Puberty Education and Menstrual Hygiene Management). These problems are further exacerbated by insufficient access to safe and private toilets and lack of clean water and soap for personal hygiene. As a result, menstruating girls and women often feel ashamed and embarrassed.

***Menstrual hygiene day** (**MHD** or **MH Day**) is an annual awareness day, on 28 May, that aims to break taboos and raise awareness about the importance of good* menstrual *hygiene management (MHM) for women and adolescent girls worldwide. It was initiated by the German-based NGO WASH United in 2014. May 28 was chosen for its symbolism since May is the 5th month of the year and most women average 5 days every month and their cycle is approximately 28 days*

Recently, an important initiative has been taken by the Govt. of India and various state governments. Sanitary napkin vending machines have been installed at various schools, colleges, offices, hospitals, and hostels. The move will not only do away with the social taboo associated with menstrual periods, but will also end the hesitation in publicly asking for sanitary pads, and the inconvenience in getting sanitary pads. HLL, which is under the Ministry of Health and Family Welfare, has already installed around 200 such machines in Delhi, Rajasthan, Madhya Pradesh, Haryana and West Bengal.

Delhi Metro has also planned to install 25 vending machines at 21 metro stations. The fully automatic multipurpose vending machines dispense various products (condoms, sanitary napkins, deodorants and contraceptive pills) at the press of a button after inserting Indian currency. The first multipurpose vending machine was inaugurated at Central Secretariat Metro Station in May 2014.

In Sept. 2015, four vending machines to dispense sanitary napkins were installed in the ladies' washroom

at Union ministry of health and family welfare, Nirman Bhavan .

Recently, Dr Babasaheb Ambedkar Marathwada University (BAMU) in Aurangabad has installed sanitary napkin vending machines on its campus, the first in Maharashtra along with independent disposing machines to get rid of the used pads.

Kerela govt. has announced to install Sanitary napkin vending machines and its incinerators in as many as 150 government and aided schools in Thiruvananthapuram.

RCOG North Zone India Announces Bi-Annual Colposcopy Courses

(Under Aegis of ISCCP & AOGIN)

(Approved by the International Federation of Colposcopy & Cervical Pathology)

Venue: RCOG North Zone Academic Centre, B235, CR Park, New Delhi

Course Convenors: Dr Saritha Shamsunder (shamsundersaritha@gmail.com /Contact no. 9313826748)
Dr Mamta Dagar (mamtadagar2004@yahoo.co.in/ Contact no. 9811437782)

BASIC COLPOSCOPY COURSE on 18th June, 2017

Aims of the course: At the end of the course the delegate should become confident in the following

1. The evidence & technique regarding the current Cervical Cancer Screening methods in India and the practical options for our country.
2. Principles and technique of Colposcopy
3. Identify normal and abnormal Colposcopy
4. Identify a low grade & high grade CIN lesion
5. Plan management and follow-up

Who can do it: The course can be done by

1. MBBS doctors interested in cervical cancer prevention
2. Gynaecologists who want to know the basics of Colposcopy prior to start doing Colposcopy
3. Pathologists interested in Cervical Cancer Screening
4. Nurses Interested in Cervical Cancer Screening

Course Fee: Rs 2000/-
Number of Delegates Limited to 25 only for each course
Last Date to Apply: 18th May 2017
Spot Registration subject to availability of seats.

ADVANCED COLPOSCOPY COURSE on 19th June, 2017

Aims of the Course: This course is meant for someone who is practising Colposcopy and wish to refresh their knowledge & skills to provide effective treatment and follow-up for their patients.

Who can do this course:

1. MBBS doctors involved in Cervical Cancer Screening programmes & projects
2. Gynaecologists

Format of the course:

1. One day course with Lectures & case discussions on management options & follow-up.
2. Hands-on module to refresh Hands-on training in Colposcopy & LEEP

Course Fee: Rs 2500/-
Number of Delegates Limited to 25 only for each course
Last Date to Apply: 18th May 2017
Spot Registration subject to availability of seats.

Registration Guidelines

Online payment available on website. *There will be no refunds on cancellation.*

Offline Payment

Download Registration form from website www.aiccrcognzindia.com and send by Bank Transfer or Demand Draft made in favour of **"RCOG NZ 2012 Plus"** payable at New Delhi. (Cheques not accepted). Registration request along with Demand Draft to be posted to the Secretariat mailing addresses as given below.

Mailing Address

RCOG North Zone Secretariat Hostel Complex – Basement Indraprastha Apollo Hospital Sarita Vihar New Delhi 110076.
Tel No.: +91-11-29871616/2146/2199, 09716801190, 09560069925. Email: rcoz_nz2012@yahoo.com
Website: www.aiccrcognzindia.com

MEMBERSHIP FORM

ASSOCIATION OF OBSTETRICIANS & GYNAECOLOGISTS OF DELHI

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Surname: .....

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Middle Name: .....

Qualification: .....

Postal Address: .....

City: ..... State: ..... Pin code: .....

Place of Working: .....

Residence Ph. No. ..... Clinical/Hospital Ph. No. .....

Mobile No: ..... Email: .....

Gender: Male: ..... Female: .....

Date of Birth: Date ..... Month ..... Year .....

Member of Any Society .....

Proposed by .....

Cheque/DD No: .....

Enclosed: Cheque/Demand Draft should be drawn in favour of:

Association of Obstetricians and Gynaecologists of Delhi

For Life Membership : Rs. 11,000/-
For New Annual Membership* : Rs. 2,000/-
For Old Renewal Membership+ : Rs. 1,200/-

Encl.: Attach Two Photocopies of All Degrees and Two Photographs
***- Annual Membership is for the calendar year January to December.**
+ - In case of renewal, mention old membership number

Send completed membership form along with cheque to:

AOGD OFFICE

AOGD Secretariat: Room No 712, 7th Floor, Private Ward, MCH Block
Department of Obstetrics & Gynecology, Guru Teg Bahadur Hospital & University College of Medical Sciences
Dilshad Garden, Delhi-110095, India
Email: secretaryaogd2017@gmail.com
www.aogd.org

DGES (Annual Conference) & IAGE (North Zone) 2017

Delhi Gynaecological Endoscopists Society (DGES)

Indian Association of Gynaecological Endoscopists (IAGE)

In association with

Association of Obstetrician & Gynaecologists of Delhi (AOGD)

25th -27th August, 2017

25thAugust, 2017 : Pre Congress Workshops

- **Laparoscopic Endosuturing Training** -Apollo Spectra Hospital, New Delhi
- **Basic Hysteroscopy Training** -Sita Ram Bhartiya Hospital, New Delhi

26th & 27th August: Indian Habitat Centre, Lodhi Road, New Delhi

26th August: Live Surgical Workshop, Relay from Apollo Spectra Hospital, New Delhi

27th August: Scientific Session

Operating Faculty

Dr. Alka Kriplani
Dr. Shailesh Putambekar
Dr. Hafeez Rahman
Dr. Malvika Sabharwal
Dr. Prakash Trivedi
Dr. Sanjay Patel
Dr. Rajendra Sankpal
Dr. B. Ramesh
Dr. Sunita Tandulwadkar
Dr. Krishan Kumar
Dr. Vivek Marwah
Dr. Dinesh Kansal

Planned Surgeries*

- **TLH - with different vessel sealers Large Uterus/ In Scarred abdomen/ Endometriosis/ Pelvic Anatomy Demonstration**
- **Laparoscopic Myomectomy**
- **Laparoscopic Adenomyoma Resection**
- **Laparoscopic Radical surgery with Pelvic node dissection**
- **Laparoscopic Burschcolposuspension**
- **Laparoscopic Sacrocolpopexy / Hysteropexy**
- **Laparoscopic Dermoid cystectomy**
- **Laparoscopic Endometriotic clearance**
- **Hysteroscopic Myoma Resection**
- **Hysteroscopic Adhesiolysis**
- **Hysteroscopic Septal Resection**
- **Hysteroscopic Tubal Cannulation**

*Cases Subject to Availability

Registration Fee (26th, 27th August - Surgical Workshop and Scientific Session)

Dates	DGES Members	Non Members	PG
Upto 15th July, 2017	4000	4500	2500
16th July - 05th August, 2017	4500	5000	3000
Late & Spot	5500	6500	3000

Registration Fees for 25th August, 2017 - Pre Congress Workshop - Rs.1500 (Limited Registration)

Conference Secretariat:

Jeewan Mala Hospital

67/1 New Rohtak Road, New Delhi-110005
(L): 011-40043355 (M): 9212150571, 9212526855, 9811557511
E-mail: dgesjmh2017@gmail.com • Website: www.dges.in


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