Royal College of Obstetricians & Gynaecologists

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NEWSLETTER

India South
International Representative Committee

www.aiccrcogsz.com

Dear Friends,

It is good to connect after a long gap and I hope the year has been a good one so far. Summer is at its peak and I hope most of you have had a chance to take a break and enjoy a holiday.

As I write this note for what is the first newsletter of 2023, I am deeply concerned by the increasingly challenging environment in which we are practising. Every so often we are hearing about incidence of violence against doctors. There is a compelling need for all of us to come together to understand what it is that is driving this and address that on an urgent basis. It is equally important to strengthen the safety for ourselves and improve communication with the public. I would be very happy to hear how we as a group can do this and look forward to hearing from you at chair@aiccrcogsz.com. This could be our focus and we can work on some meaningful steps in the coming few months.

With regard to the activities of the college, the MTI interviews have successfully been completed this year and hopefully the candidates will be placed soon. The Part 3 exams have been conducted in person and virtually just last week. The in person exams in Chennai were conducted very smoothly. There has also been ongoing training for both clinical and Lay examiners. I am very thankful for the enthusiasm from our zone for this.

The RCOG world congress is a hybrid event this year again. We are having an India session at the Congress which will become a regular feature every time the Congress is in UK.

The traveling fellowship for the south zone is opening again this year. The details will be up on the website in the first week of June. I encourage the younger MRCOG's to apply and benefit from this opportunity.

Uma Ram

LEAD ARTICLE

Hormone replacement therapy and menopause: an opportunity for better life?

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Menopause and its impact on women's health and society, is a topic of growing concern in the developed world as well as the developing nations. As an emerging global economy, India has an expanding population-pyramid & increasingly relies on human resources. Inevitably, health care in India must be prepared to cater for the needs of the modern Indian society. With increasing life expectancy of our population, women are spending almost half of their lives in the peri-menopausal or menopausal stage. The onus is therefore, upon all of us to try to remove any barriers allowing women to access advice for their menopause-related symptoms, improve their quality of lives and in turn make the society a better place to be.

Menopause is defined as permanent cessation of menstruation resulting from loss of ovarian follicular activity. Average age of natural menopause in India is 46.6 years (Prasad, J.B., Tyagi, N.K., Verma, P., 2021) while the average age is 51 years in the UK. Menopause before the age of 40, is classed as premature menopause. Menopause-related symptoms range from hot flushes, insomnia, night sweats, tiredness, brain fog, anxiety, low mood, loss of libido, dyspareunia, vaginal dryness and recurrent urinary tract infections. In this article, we aim to focus on the potential management options for menopausal symptoms.

Management options for menopausal symptoms include lifestyle modifications, hormone replacement therapy, non-hormonal therapy and complimentary therapy.

Lifestyle modifications known to help menopausal symptoms include maintaining good sleep hygiene, a healthy diet including adequate calcium intake, avoiding smoking, regular exercises and use of relaxing routines such as yoga, mindfulness and meditation. Wearing a light clothing during bedtime and a shower before bed help some women with the night-time hot flushes. Vaginal dryness often contributes to dyspareunia and impacts sexual relations. Vaginal moisturisers or lubricants often help relieve the vaginal dryness.

Hormonal replacement therapy (HRT) remains the most effective treatment for menopausal symptoms. HRT usage globally declined significantly in 2002, following the publication of Women's Health Initiative (WHI) and Million Women's Study. Sadly, with it went down the quality of life of countless menopausal women across the world. (Pines, A., Sturdee, D.W, MacLennan A.H., 2012).

Women with premature ovarian insufficiency are predisposed to an earlier onset of cardiovascular disease episodes and osteoporosis. HRT is particularly beneficial in these women as it prevents osteoporosis and reduces the incidence of atherosclerosis (Stevenson J., 2009). HRT is preferred over the bisphosphonates in younger women and it is advisable for these women to be on HRT at least until the age of natural menopause.

Decision to use HRT, its dosage and duration of HRT usage should be individualised based on the benefits-risks profile. The guidance is to use the HRT in the lowest effective dose for the shortest possible time (The National Institute for Health and Care Excellence, UK, 2015). However, with increasing expertise on the topic, we now know that there is no upper age-limit for the use of HRT. In the UK and other developed countries, women are advised to undergo an annual evaluation of HRT with their health-care professional to review the risk-benefit profile and they may continue with HRT for as long as clinically desired.

Before commencing HRT:

A detailed history of the woman's gynaecological, medical, surgical and family history including history of any medical problems especially breast cancer, osteoporosis, cerebrovascular disease and thrombo-embolism is helpful to help decide on appropriateness of HRT, type of HRT and route of administration. Baseline body mass index and blood pressure should be measured & documented. There is no indication for a pre-treatment breast examination, mammogram, pelvic examination, or additional cervical smear, if the woman is up to date with the screening protocols & is asymptomatic. Investigations such as endometrial sampling or endometrial thickness measurement by transvaginal ultrasound scan are also not a pre-requisite for commencing HRT (Bakour, S.H., Williamson J., 2015). However, if specific symptoms exist, women should be offered relevant examination and investigations to rule out any pathology.

Benefits of HRT:

HRT is beneficial in relieving the menopausal symptoms such as hot flushes, night sweats, mood swings, menopause-related low mood, anxiety and loss of libido. It improves sleep quality in women with concomitant vasomotor symptoms (Cintron, et al., 2017). HRT also reduces the risk of development or worsening of pre-existent osteoporosis in postmenopausal age.

Risks of HRT:

For most women and even some clinicians, HRT evolves fear of breast cancer, increased risk of venous thromboembolism (VTE), cardiovascular disease (CVD), stroke and dementia in women over 65 years of age (Majoribanks, J. et al., 2012). However, in low-risk women, the risks associated with HRT are much lower as compared to other factors such as obesity, smoking and moderate alcohol intake (BMS Consensus Statement, 2020).

The increase in risk of breast cancer with HRT remains a controversy. Where risk with HRT is estimated to be elevated, the degree conferred is considered small. There is little or no change in the risk of breast cancer with unopposed estrogen. The combined HRT (estrogen and progestogen) can be associated with a dose – dependent increased risk. This increase in risk is related to treatment duration and reduces after stopping HRT (British Menopause Society, 2020).

Oral estrogen leads to increased activated protein C resistance, which results in increased risk of blood clot. Transdermal estrogen by-passes the hepatic metabolism that produces activated protein C resistance, and is unlikely to increase the risk of blood clot or stroke above their baseline risk. Hence, it is advisable to avoid oral HRT for women with raised BMI (over 30) and/or any risk factors for venous thrombo-embolism.

HRT and contraception: -

The low levels of hormones in HRT make it unsuitable for contraception. Thus, it is recommended to use contraceptive methods alongside HRT to prevent pregnancy. Few methods can serve a dual purpose such as levonorgestrel intrauterine system (LNG-IUS), Mirena®, which has a contraceptive role along with providing progesterone component of HRT. The other progesterone contraceptive options including Progesterone only pills (POP), subdermal implants (IMP) and Depo – Medroxyprogesterone acetate injection (DMPA) are safe to be used as contraceptive alongside sequential HRT but cannot be recommended for endometrial protection with estrogen – only HRT. Combined hormonal contraception should not be used in combination with HRT. In eligible women, combined hormonal contraceptives can be used over the age of 40 years only where the advantages of using the method outweigh the theoretical or proven risks.

Choice of HRT:

HRT regimes are either cyclical (also known as sequential) combined HRT or continuous combined HRT.

Cyclical/Sequential HRT is recommended for women in their peri-menopausal state where they still have

periods or are within 12 months from the last menstrual period. Cyclical HRT is commonly prescribed with the aim of achieving cyclical withdrawal bleeds on a monthly basis. This includes estrogen daily and progestogen for 12-14 days of each menstrual cycle, for endometrial protection.

Continuous combined HRT is prescribed in the postmenopausal phase with both the hormones, estrogen and progestogen being prescribed for daily intake/application without a break. In this regimen, an all-round hormonal cover does not break for a withdrawal bleed.

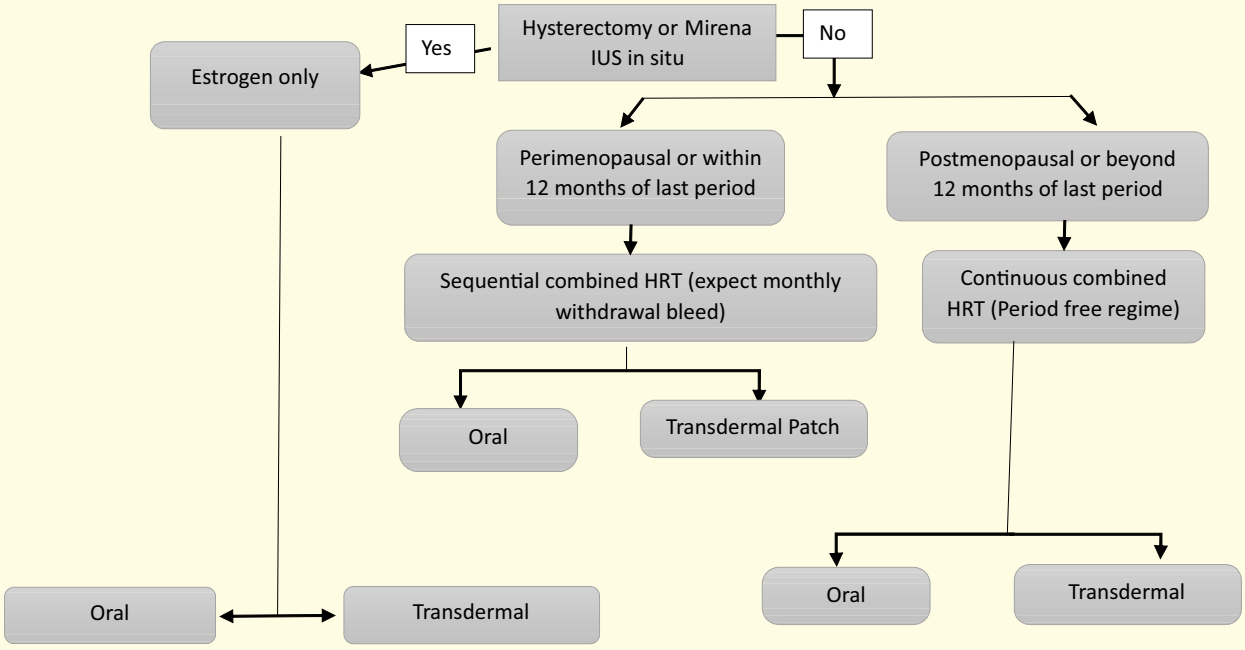

Figure 1: An overview of the HRT routines.

Contraindications to the use of HRT:-

Absolute contraindications to the use of HRT include current VTE, stroke, breast cancer, genital tract cancers or undiagnosed vaginal bleeding.

Relative contraindications where specialist menopause advice is recommended, are as follows:-

1. Existing cardiac disease
2. Active liver disease
3. Systemic lupus erythematosus
4. Previous breast cancer
5. Previous ovarian/endometrial cancer
6. Previous personal/family history of venous thromboembolism.

What to expect on HRT?

Women should be informed of the common side-effects of the hormones, which are often transient, in the first 3 months. These include headaches, breast tenderness, bloating, muscle cramps and unscheduled vaginal bleeding. Weight gain is not a recognised adverse effect of HRT (Kongnyuy, E., et al. 2000).

Unscheduled vaginal bleeding on HRT:-

For women on sequential HRT, planned bleeding called withdrawal bleeding is expected at the end of each cycle. Abnormal bleeding for women on sequential HRT would be defined as heavy, profuse or that which

presents as a change in pattern at the end of or after the progestogen phase, or may occur at any time when it is referred to as breakthrough bleeding.

Continuous combined HRT is expected to lead to amenorrhea and therefore should not cause cyclical or breakthrough bleeding. It is very common to have unscheduled vaginal bleeding on continuous combined HRT and is seen in up to 80% of women on continuous combined HRT in the first three months of treatment. It often requires modifying the progestogenic component of HRT and if it persists after 4-6 months, then the unscheduled vaginal bleeding should be investigated promptly by endometrial assessment.

Non – hormonal treatment options: -

Anti-depressant group of drugs such as selective serotonin reuptake inhibitors, selective noradrenaline reuptake inhibitors or gabapentin may be helpful for vasomotor symptoms especially where hormones are contraindicated (for example in breast cancer patients) or where women do not want to take HRT. For women on tamoxifen, selective serotonin reuptake inhibitors should not be used, instead selective norepinephrine reuptake inhibitors should be preferred.

Clonidine is a centrally acting – adrenergic agonist used for the treatment of hot flushes. It raises the sweating threshold by reducing norepinephrine release and thus provides a non-hormonal alternative for relieving menopausal flushes in patients with endometrial or breast cancer.

Complementary treatment: -

While pharmacologic approach can help some women with menopausal symptoms, complementary and alternative medications may benefit for those who cannot take or choose to avoid HRT. Evening primrose oil, black cohosh, red clover and sage promise to relieve hot flushes. St. John's wort offers an alternative to antidepressants, gingko biloba may improve memory and agnus castus helps regulate hormone fluctuations and premenstrual tension for some women. Despite the promises, a lack of official regulation with these complementary and alternative options makes them unsuitable for medical prescriptions.

Replicating a multifaceted approach similar to antenatal care can help women transition effectively in menopause with enough information to understand what to expect and when to report, would boost 'menopause preparedness'. As maternal awareness routines have shown to reduce pregnancy related mortality and morbidity, the menopausal preparedness curriculum would promote pre-menopausal wellness and improve health outcomes. A holistic patient care model that considers symptoms which hinder quality of life, involves appropriate risk assessment, enables women to make an informed choice, seek help with concerns and offers timely investigations of the symptoms arising with its use would aid in the normalization of this life transition and improve quality of life for patients.

Conclusion:-

With increasing life expectancy, menopause is gradually becoming a mid – life event. The therapeutic approach to managing women in the menopausal phase of their life has a dual but continuous aim. On one hand, the aim is to address the symptoms arising with the transition into the menopausal state but on the other hand, the goal is to reduce the postmenopausal adverse outcomes arising with long-term duration of the treatment. The relative importance of these two aims may vary at different stages as the women traverse through the menopausal time of their life and so the treatment should be customised to address their concerns and fulfil their expectations.

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Travel back in time - Ultrasound - how it developed over the years

As we try to delve into the history behind the evolution of ultrasound, it is evident that several scientists have made major breakthroughs and landmark contributions to its development over the years.

Pierre Curie in 1880 described the piezo electric effect whereby mechanical distortion of ceramic crystals would produce an electric charge; the reverse of this effect is used in all transducers to generate ultrasonic waves. The development of Radar by Watson-Watt and his team using electromagnetic waves in 1943 was later adapted for ultrasound to produce two dimensional images. Thomas Young(1801-phase shifting) and Christian Doppler(1842-Doppler effect) promulgated their theories which helped in development of 3 D imaging and blood flow studies respectively.

George Ludwig explored issues of attenuation of ultrasound energy in tissues, impedance mismatch between tissues and the optimal sound wave frequency for a diagnostic instrument. Ludwig reported the velocity of sound transmission in animal soft tissues to be between 1490 and 1610 m/s, with a mean value of 1540 m/sec which is still in use today. He also determined that the optimal scanning frequency of the ultrasound transducer was between 1 and 2.5 MHz. His team used metal flaw detectors to locate masses in the gall bladder and breast (1949).

Prof Douglass Howry produced the first tomographic images of human anatomy(1952).His approach involved immersing the body part to be examined in degassed water (called water delay scanning) to avoid artifactual echoes from superficial structures. The 'Pan-scanner', where the transducer rotated around the patient, was developed in 1957. The patient sat on a modified dental chair strapped against a plastic window of a semicircular pan filled with saline solution, while the transducer rotated through the solution in a semicircular arc.

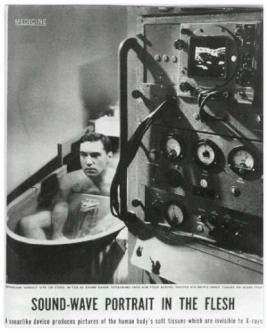


Fig 1: The original Somascope from Howry et al in the Medicine section of the Life Magazine® in 1954

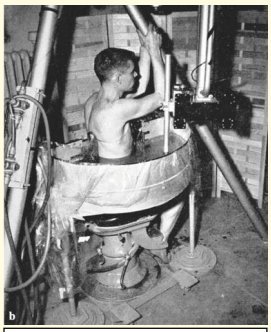
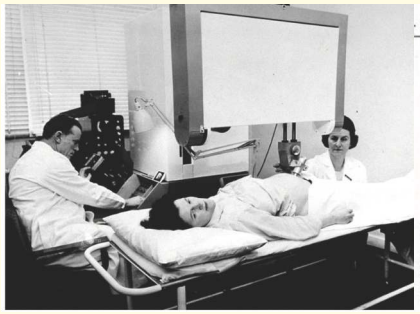
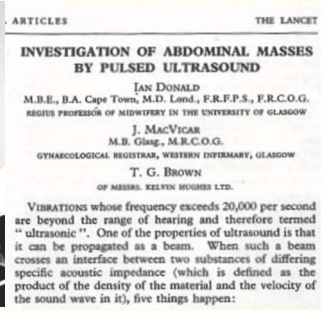


Fig. 2: Prof Howry's Pan Scanner

Prof Ian Donald in collaboration with Tom Brown(an engineer) and Dr John MacVicar developed the world's first contact compound 2D ultrasound scanning machine called the Diasonograph





. ARTICLES THE LANCET

INVESTIGATION OF ABDOMINAL MASSES BY PULSED ULTRASOUND

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VIBRATIONS whose frequency exceeds 20,000 per second are beyond the range of hearing and therefore termed "ultrasonic". One of the properties of ultrasound is that it can be propagated as a beam. When such a beam crosses an interface between two substances of differing specific acoustic impedance (which is defined as the product of the density of the material and the velocity of the sound wave in it), five things happen:

Fig 3,4: Prof Ian Donald in 1960 with his Diasonograph and his publication

The diasonograph had the best image resolution of its time as compared to its competitors and allowed its users to take biometry. The main disadvantage was its size-it was 8ft in height and occupied one third of the scanning room with a large gantry that held the probe.

The A-mode scan had been used for early pregnancy assessment (detection of fetal heart beat), cephalometry and placental localization in the early 1960s, the measurement of the biparietal diameter(BPD) having been invented by Ian Donald in 1961.

Prof. Stuart Campbell's landmark publication in 1968 "An improved method of fetal cephalometry by ultrasound" described the use of both the A- and B-mode scan to measure the fetal biparietal diameter. In 1971, Prof. Campbell and Newman published nomograms for the biparietal diameter from the 13th weeks of gestation. In 1975, his team introduced the measurement of the abdominal circumference.

Visualization of the fetus in 3-D had always been on the minds of many investigators, including Tom Brown in Glasgow who had developed an elaborate Multiplanar scanner in 1973. With improvements in ultrasonic and computer technology, work on three-dimensional visualization began to appear in the early 1980's. Two-dimensional arrays were mechanically moved to provide the third dimension by sweeping or rotating, using either constrained free-hand adapters or an existing probe alongside with an external motion-sensing system. With time, it progressed to mechanically-driven arrays built-in into the probe and this technique was described in the European Journal of Ultrasound in 1994. The process of acquisition is microprocessor-controlled and automatic. Perception in 3-D surface is achieved by a combination of depth shading, colour mapping, texture mapping and ray-traced volume rendering. The introduction of Multiplanar reformatting allowed the generation of any arbitrary slice from within the acquired data. All these are dependent on the software algorithms and processing power of the systems within the machines.

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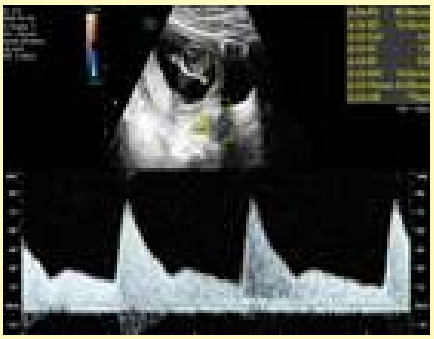
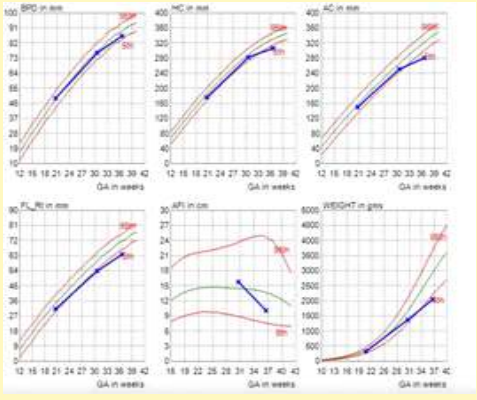
QUIZ



1. First trimester anomaly scan at 12w4d shows diastolic notching in the uterine artery. The mean uterine artery PI is normal. Which of the following statements is correct:
   A) Is an indication to start Tab. Aspirin 150mg
   B) To consider as high risk for Preeclampsia
   C) Is not an indication to start Tab. Aspirin
   D) Needs close monitoring with uterine artery Doppler after 4 weeks

1. All the following parameters point towards a diagnosis of late onset FGR (USG done at 36 weeks)except
   A) EFW less than 3rd centile with normal fetal Doppler
   B) EFW at 20th centile, Umbilical artery PI at 50th centile(previous scan at 32 weeks shows EFW at 75th %ile)
   C) AC < 10th centile with CPR < 5th centile
   D) Uterine artery mean PI at 95th centile with EFW at 23rd %ile

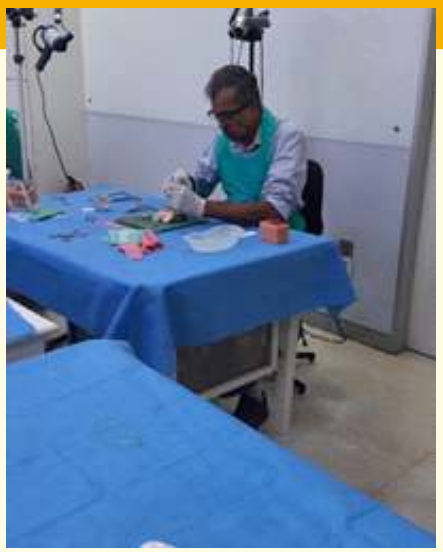


Answers at Page 12

ACTIVITIES

The 3rd Annual Conference of the RCOG IRC India South was held in Kochi on 15th and 16th October 2022

Sims Black Travelling Professorship was awarded to Dr Abdul Sultan,Professor OBGYN,Croydon University UK in 2022
https://www.rcog.org.uk/news/blog-sims-black-award/



RCOG Part 3 revision courses were conducted in Chennai and Bengaluru in April 2023

Chennai: The Course was held on the 22nd and 23rd of April 2023 with lectures followed by mock OSCE circuits on the second day. 12 delegates attended the course which included eminent faculty from Tamil Nadu and the UK

Bengaluru: 13 candidates attended the Course held on the 29th and 30th of April with faculty from Karnataka (Bangalore and Mysore) and the UK

RCOG Part 3 exams:
The RCOG Part 3 exams were held in Chennai and New Delhi on 10th and 11th May and 15th and 16th May respectively

UPCOMING EVENTS

The RCOG world Congress would be held in London during 12-14th June 2023. It is a hybrid event this year and would include an India session which is slated to become a regular feature whenever the Congress is held in UK.

The RCOG, in collaboration with the Federation Obstetricians and Gynaecologists of India (FOGSI), the All India Co-ordination Committee (AICC) and RCOG India Liaison Group are hosting this special face-to-face joint meeting covering topics including Medicolegal issues in obstetrics and gynaecology in current practice, menopause and ways to increase gynaecological cancer screening uptake.

The 36th AICC RCOG Annual Conference is being hosted by the RCOG NZ and is going to be held between 28th September and 1st October 2023 at New Delhi. The last date for abstract submission is June 30th 2023

ANNOUNCEMENTS

Applications invited for the 6TH AICC RCOG Southern Zone Travelling Fellowship

The AICC RCOG southern zone invites applications from members of RCOG from Telangana, Andhra Pradesh, Karnataka, Kerala, Puducherry and Tamil Nadu for the travelling fellowship. The duration of the fellowship is two weeks and selected applicants would be observers in designated centres of excellence in Fetal medicine, Urogynaecology, Reproductive Medicine, Infertility, Gynaecologic Oncology or Endoscopy.

Details would be posted on the AICC RCOG SZ website in the first week of June 2023.

ANSWERS TO QUIZ:

1. **C**
   Diastolic notching in the uterine arteries is normal in the first trimester.
   The screening algorithm for preeclampsia(11-14 wks) includes the Uterine artery PI in combination with mean arterial pressure, maternal biophysical and biochemical parameters for risk assessment. Screen positive women are started on T.Aspirin 150 mg/d from 11-14 till 36 weeks gestation

2. **D**
   As per the Delphi consensus, Definition of Late onset FGR(GA>=32weeks,in absence of congenital anomalies) is
   · • AC/EFW <3rd centile
   Or at least two out of three of the following
   1. AC/EFW <10th centile
   2. AC/EFW crossing centiles(>2 quartiles on growth centiles)
   3. CPR< 5th centile or Umbilical artery PI>95th centile

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