CONNECT

Obstetrical and Gynaecological Society of Malaysia

2018/2019 Council Issue 5

EMBRACING, ENGAGING & INFORMING

Role of Foetal and **Umbilical Doppler** Ultrasound in Low Risk Normal Pregnancy: What does the Evidence say?

Progesterone based Treatment in Endometriosis

Menstrual Problems in Adolescents

INSIDE INBOX

A publication by the Obstetrical and Gynaecological Society of Malaysia

Contents

Editorial Team

Editor : **Dr Eeson Sinthamoney**
Dr Ng Beng Kwang
Ms Premalatha B
Prof Dr Nazimah Idris
Mr Chong KL

Creative : **Pronto Ad Sdn Bhd**
ask@prontoad.com.my

As I See it

Our specialty has advanced tremendously in the last 20 years.

We are producing specialists in a 2 tier system – MRCOG from UK as well as the local Masters.

Subspecialists are also trained locally and now we have such people accredited and working in our midst both in the Government as well as in the private sector.

The time has come to review the accreditation of the procedures that are done or need to be done at a higher level so that competency is maintained.

This has been done in western countries and some of the accreditation is updated as a yearly certification e.g. number of amniocentesis, chorionic villus sampling, IVF procedures which are done for licensing purposes.

We now have the CME requirement from next year for the annual practicing certificate but I feel we need to strive further in the future to maintain competency levels.

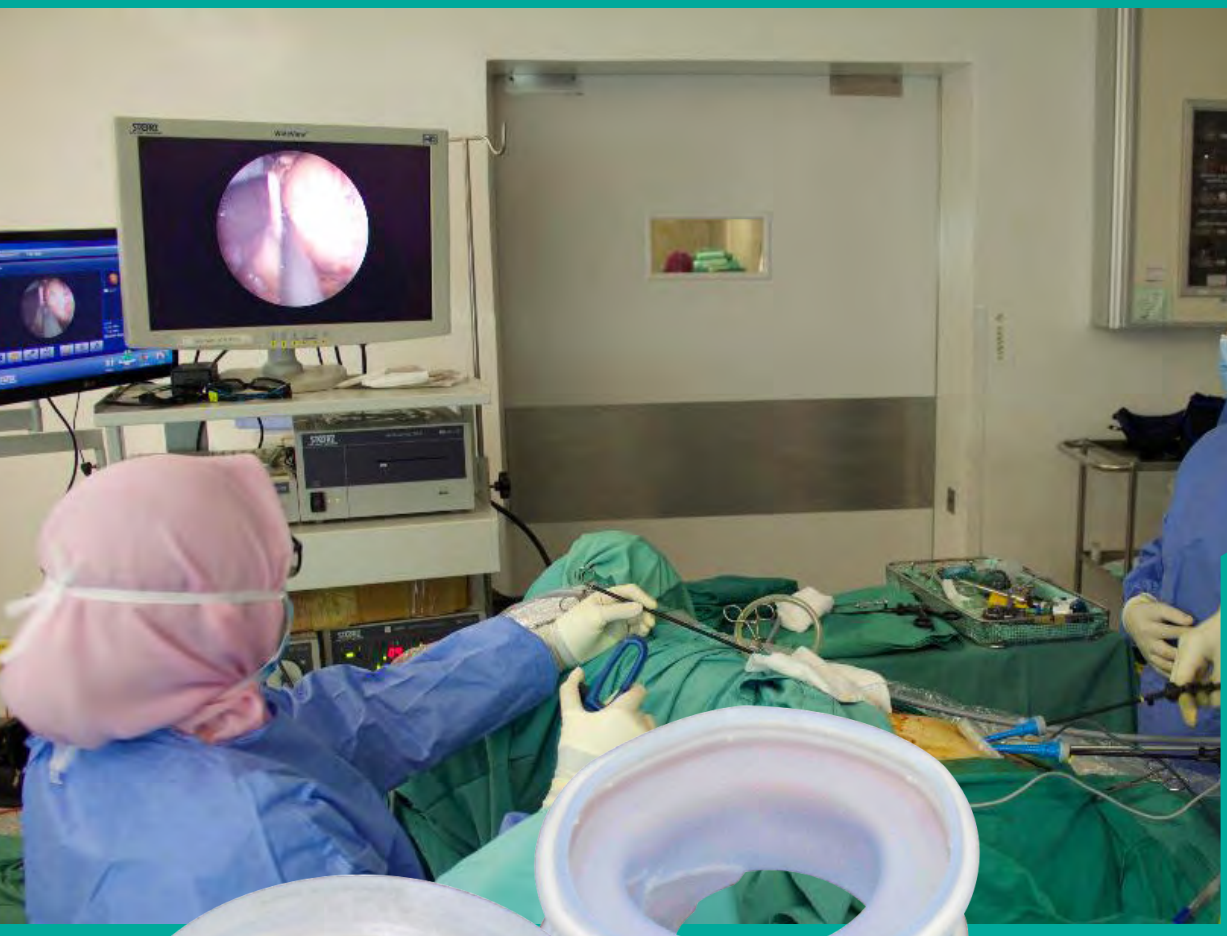
Many of such courses viz nuchal translucency, Pet screening, cervical length estimation in pregnancy are available as an online exam from the Fetal Medicine Foundation of UK and leads to the yearly recertification on submission of ultrasound pictures to maintain quality.

In future this can be expanded to operative procedures as well and in our current medico-legal climate this is becoming increasingly important.

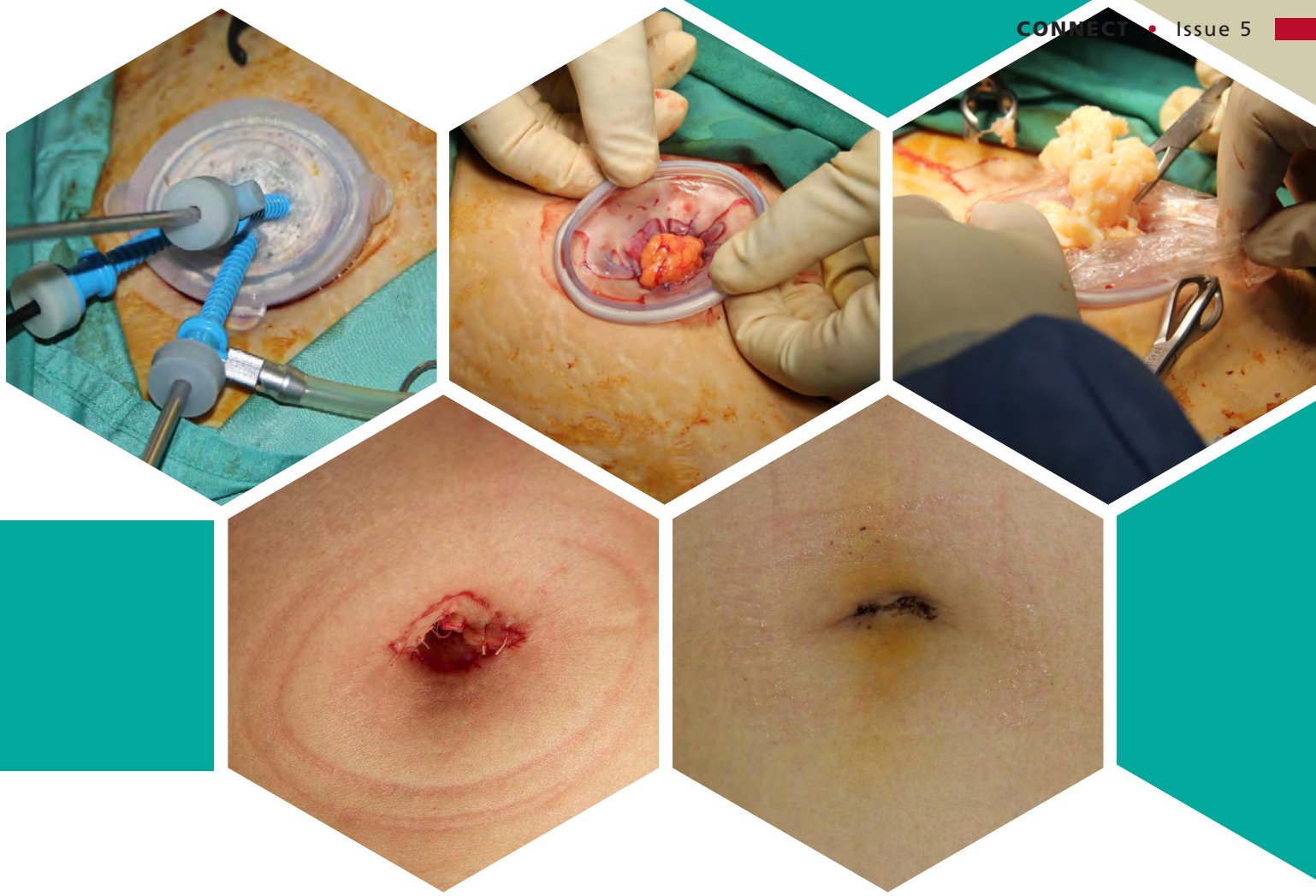
It is up to the Ministry of Health & the Academy of Medicine to consider this strategy in the near future.

Dr Raman Subramaniam

Single Incision (laparoscopy) Laparoscopic Surgery using the Hakko E-Z Access and Lap Protector



Dr S. Selva



Single incision laparoscopy (laparoscopic surgery) is challenging. There are several ways to perform this surgery and I have described the various methods in my book "Laparoscopic surgery in Gynaecology and Common diseases in Women". Recently, I performed a single incision laparoscopy (laparoscopic Surgery) using a Japanese product made by Hakko. It is called E-Z Access and lap protector. It comes in 2 shapes, round and elliptical. I performed 3 cases using the elliptical port; namely, laparoscopic cystectomy & laparoscopic adhesiolysis for endometriosis, total laparoscopic hysterectomy for fibroid and laparoscopic myomectomy for fibroid.

I am pleased with this port for several reasons.

1. Most ports (SILS, Glove port, triport) do not allow you to operate with the instruments in a parallel position. Crossing of instruments is necessary and this causes confusion during dissection. Also, most of the time when instruments are crossing, the surgeon is suturing using only 1 hand. I prefer ports that allow me to use straight instruments with parallel dissection and suturing. So far, only 3 ports allow me to do this: the Lagis Port, Gel Port and the latest E-Z Access.

2. Unlike the LAGIS LapBase Port, this port is small. When you use a large port like the Lagis port, the inner ring sits in the abdomen at a wider area. So, when you want to place an extra port laterally, the inner ring interferes with the placement of the port and it has to be placed quite far away. E-Z port, being smaller, allows for the extra port to be easily placed laterally.

3. After experimenting with midline and transverse incisions in the umbilicus, I prefer a transverse incision. In this way, my instruments are placed sideways and are far apart. The elliptical structure of the E-Z port allows me to place the 2 instrument ports even further apart so that using the 2 instruments in a parallel manner is easier.

What are the drawbacks of this port?

1. It takes some time to learn how to place the lap protector into the abdomen.

2. The lap protector is soft and can tear easily.

The best part of single incision laparoscopy (laparoscopic surgery) is that removal of the specimen is easy. Cysts such as the dermoid cyst can be easily removed through the 2 to 2.5 incisions in the umbilicus. Fibroids can be placed in a bag and hand morcellated through the incision.

Please watch the video of single incision laparoscopic myomectomy using the E-Z Access port at:
https://www.youtube.com/watch?v=X3yfrD5ouxY&t=63s

Role of Fetal and Umbilical Doppler Ultrasound in Low Risk Normal Pregnancy:

What does the Evidence say?

Dr Neha Sethi

The principles of antenatal care for women with uncomplicated low risk pregnancies are to provide advice, education, reassurance and support, to address and treat minor problems arising during pregnancy, to provide effective screening during the pregnancy, and to identify problems as they arise with referral when appropriate. One of them includes identifying the 'at risk' fetus so that appropriate clinical interventions can be applied which could result in reduced perinatal morbidity and mortality.

Doppler ultrasound is used to assess the uterine, placental and fetal arterial and venous systems and is especially relevant in high risk pregnancies. It is based on the 'Doppler effect' that was first described by Christian Johanna Doppler in 1842. However, it was first applied to the human fetus by Fitzgerald in 1977. The Doppler effect uses sound waves to detect the movement of blood in vessels and it measures the different frequencies based on velocity and direction of the flow of blood.

Abnormal blood flow patterns in fetal circulation detected by Doppler ultrasound may indicate poor fetal prognosis. It helps to identify the compromised fetus in 'high-risk' pregnancies and, therefore, deserves assessment as a screening test in 'low-risk' pregnancies. However, it is also possible that false positive Doppler ultrasound findings could lead to adverse outcomes from unnecessary interventions, including preterm delivery.

Many trials have been undertaken to see the routine use Doppler ultrasound as a screening tool in identifying the compromised fetuses in apparently low risk pregnancies. This is essentially relevant as using it in high-risk pregnancies, where there is concern about the fetal condition, shows benefits. However, its value as a screening tool in all pregnancies needs to be assessed as there is a possibility of unnecessary interventions and adverse effects.

A Cochrane review in 2017 on fetal and umbilical Doppler in high risk pregnancies looked at nineteen trials involving 10,667 women. Eighteen of these studies compared the use of Doppler ultrasound of the umbilical artery of the unborn baby with no Doppler or with cardiotocography (CTG)[1]. One recent trial included in the review compared Doppler examination of other

fetal blood vessels (ductus venosus) with computerised CTG. The use of Doppler ultrasound of the umbilical artery in high-risk pregnancy was associated with fewer perinatal deaths, fewer inductions of labour and fewer caesarean sections. There was no comparative long-term follow-up of babies exposed to Doppler ultrasound in pregnancy in women at increased risk of complications. However, there was no clear difference in the number of stillbirths, operative vaginal deliveries, or babies with a low Apgar score five minutes after birth. In babies with growth restriction, when the decision to deliver was based on late ductus venosus changes or abnormalities on computerised CTG, this appeared to improve long-term (two-year) developmental outcome[1].

When we look at the evidence that assessed the effects on obstetric practice and pregnancy outcome of routine fetal and umbilical Doppler ultrasound in unselected and low-risk pregnancies, the Cochrane review in 2015 included five trials that recruited 14,624 women, with data analysed for 14,185 women. This showed that overall, routine fetal and umbilical Doppler ultrasound examination in low-risk or unselected populations did not result in increased antenatal, obstetric and neonatal interventions[2]. There were no differences noted in the primary outcomes of perinatal death and neonatal morbidity[2]. There was no evidence of differences for the outcomes of caesarean section, neonatal intensive care admissions or preterm birth less than 37 weeks[2]. There is no available evidence to assess the effect on substantive long-term outcomes such as childhood neurodevelopment and no data to assess maternal outcomes, particularly maternal satisfaction. The studies were not of high quality and were all undertaken in the 1990s. Hence authors' conclusion was that there were no improvements identified for either the baby or the mother, though more data would be needed to prove whether it is effective or not for improving outcomes[2,3].

In another study by Bakalis et al, 2015, the potential value of cerebro-placental ratio (CPR) at 30-34 weeks of gestation in routine screening to predict adverse perinatal outcome did not demonstrate to improve any perinatal outcome[4].

In conclusion, the current evidence suggests that the use of Doppler ultrasound on the umbilical artery in high-risk pregnancies reduces the risk of perinatal deaths and may result in fewer obstetric interventions. On the contrary, existing evidence does not provide conclusive evidence that the use of routine umbilical artery Doppler ultrasound, or combination of umbilical and uterine artery Doppler ultrasound in low-risk or unselected populations benefits either mother or baby[1,5,6].

References

1. *Alfirevic Z, Stampalija T, Dowswell T. Fetal and umbilical Doppler ultrasound in high-risk pregnancies. Cochrane Database Syst Rev 2017;6:CD007529.*
2. *Alfirevic Z, Stampalija T, Medley N. Fetal and umbilical Doppler ultrasound in normal pregnancy. Cochrane Database Syst Rev 2015;4CD001450.*
3. *Vollgraff Heidweiller-Schreurs CA, De Boer MA, Heymans MW, et al. Prognostic accuracy of cerebroplacental ratio and middle cerebral artery Doppler for adverse perinatal outcome: systematic review and meta-analysis. Ultrasound Obstet Gynecol. 2018;51(3):313-322.*
4. *Bakalis S, Akolekar R, Gallo DM, et al. Umbilical and fetal middle cerebral artery Doppler at 30-34 weeks' gestation in the prediction of adverse perinatal outcome. Ultrasound Obstet Gynecol. 2015;45(4):409-20.*
5. *Figueira CO, Surita FG, Dertkigil MS, et al. Fetal Hemodynamic Parameters in Low Risk Pregnancies: Doppler Velocimetry of Uterine, Umbilical, and Middle Cerebral Artery. ScientificWorldJournal. 2016;2016:1693704.*
6. *Bolz N, Kalache KD, Proquitte H, et al. Value of Doppler sonography near term: can umbilical and uterine artery indices in low-risk pregnancies predict perinatal outcome? J Perinat Med. 2013;41(2):165-70.*

Menstrual Problems In Adolescents

Dr Nik Rafiza Afendi

Dysmenorrhoea is a common problem in adolescents. In a study conducted in Negeri Sembilan involving 2411 secondary school adolescent females, the reported incidence of dysmenorrhoea was 69.4%[1]. It is one of the most commonly reported reasons for absenteeism from school or work[2].

Dysmenorrhoea in adolescents is usually primary (functional) with no pelvic pathology. It is described as lower abdominal pain, which is cramping by nature, and may radiate to the back or thigh. Associated symptoms of dysmenorrhoea are described in Table 1.

Cramps	Back pain
Nausea	Vomiting
Headaches	General aches
Weakness	Dizziness
Depression	Irritability
Facial blemishes	Flushing

Table 1. Symptoms of dysmenorrhea

Dysmenorrhoea is less common during the first 2-3 years after menarche, when most menstrual cycles are anovulatory. It becomes more prevalent during mid and late adolescence with the establishment of a regular ovulatory menstrual cycle.

It typically accompanies the start of menstrual flow or occurs within a few hours before or after onset and may last for the first 24-48 hours. It is the result of excessive production of prostaglandin and leukotrienes. It improves as the adolescent becomes older and appears to reduce after the first childbirth[3]. It is in contrast to pain during menstruation experienced by adults which is usually due to underlying causes such as endometriosis.

The diagnosis of primary dysmenorrhoea in adolescents is mainly based on history and examination. Pelvic examination is not necessary if the patient is not sexually active[4].

The mainstay of treatment in this age group is non-steroidal anti-inflammatory drugs (NSAIDs), combined oral contraceptive pills (COCP), or a combination of NSAIDs and COCP.

NSAIDs (such as mefenemic acid, ibuprofen or celecoxib) are used in the treatment of dysmenorrhea in adolescents. They inhibit cyclooxygenase which leads to a reduction in prostaglandin production, thus resulting in lower levels of prostaglandin. This, in turn, reduces uterine contraction; therefore, less discomfort. It's the preferred initial treatment and is usually tried for at least 3 menstrual cycles. Treatment is most effective when it starts 1-2 days before onset of menses. In adolescents who cannot predict the initiation of their menses, they should be instructed to start NSAIDs as soon as menstrual bleeding begins, or as soon as they have any menstruation-associated symptoms. It should be taken with food to prevent gastric irritation.

If treatment with NSAIDs is not effective, COCP should be offered for at least 3 menstrual cycles[5]. COCP is widely used. It inhibits ovulation and result in the concomitant reduction of prostaglandin. They are safe for adolescents and have other important health benefits such as improvement in acne as well as the prevention of unintended pregnancy.

If trials of NSAIDs and COCP are unsuccessful, further investigations such as pelvic ultrasound and diagnostic laparoscopy are warranted to rule out secondary causes such as Mullerian abnormality, endometriosis and pelvic inflammatory disease[6].

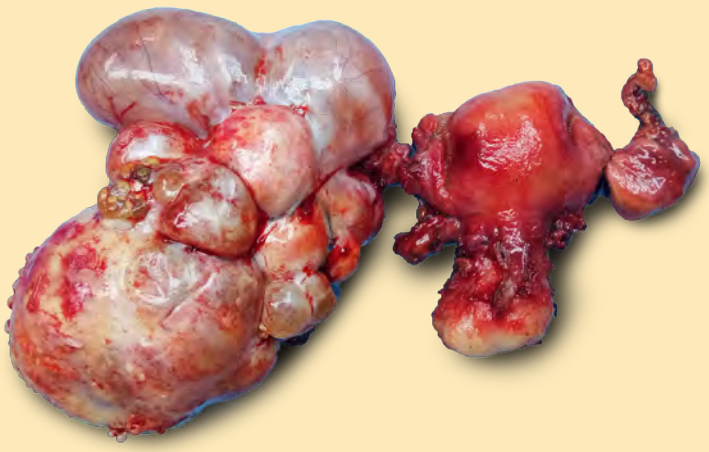
Adolescents with an early onset of severe dysmenorrhea since the beginning of menarche should be evaluated to rule out a partially obstructive anomaly. Examples of Mullerian abnormality includes didelphic uterus with unilateral obstruction, OHVIRA syndrome and Accesorry and cavitated uterine masses (ACUM)[7,8].

References

1. *Lee LK, Chen PCY, Lee KK, Kaur J. Menstruation among adolescent girls in Malaysia: A cross sectional school survey. Singapore Med J 2006;47(10):869-74.*
2. *Klein JR, Litt IF. Epidemiology of adolescent dysmenorrhea. Paediatrics 1981;68(5):661-4.*
3. *Juang CM, Yen MS, Twu NF, et al. Impact of pregnancy on primary dysmenorrhoea. Int J Gynaecol Obstet 2006;92(3):221-7.*
4. *Dietrich JE, Millar DM, Quint EH. Obstructive Reproductive Tract Anomalies. J Pediatr Adolesc Gynecol 2014;27(6):396-402.*
5. *Afendi NR, Chan SSC. Adolescent menstrual problems. JPOG 2015:81-87.*
6. *Deligeoroglou E, Tsimaris P. Menstrual disturbances in puberty. Best Pract Res Clin Obstet Gynaecol 2010;24(2):157–71.*
7. *Acién P, Bataller A, Fernández F, et al. New cases of accessory and cavitated uterine masses (ACUM): A significant cause of severe dysmenorrhoea and recurrent pelvic pain in young women. Hum Reprod 2012;27(3):683–94.*
8. *Harel Z. Dysmenorrhea in Adolescents. Ann N Y Acad Sci 2008;1135:185–95.*

Dr Badrul Zaman Muda @ Abdullah

Surgical Management of Borderline Ovarian Tumours



Borderline ovarian tumour (BOT) has been a disease of special entity in the gynaecological field. It is histologically described as atypical proliferation without stromal invasion. Since first mentioned by Taylor[1] in 1929, its "semi malignant" description status has undergone definition changes by the International Federation of Gynaecology and Obstetrics (FIGO) as 'carcinoma of low malignant potential' and "atypical proliferative tumour" by WHO[2,3]. More recently is the favoured terminology description of the 2014 World Health Organization's (WHO) Classification of Tumours of the Female Reproductive Organs[4]; i.e., "borderline tumour interchangeable with atypical proliferative endometrium" based on improved knowledge of its diagnostic criteria and better understanding of the disease. BOTs are staged using the FIGO classification for malignant epithelial tumours. A large systematic review has shown that the majority (78.9%) of BOTs are diagnosed at FIGO stage I and tumour extension beyond the pelvis are relatively uncommon[5].

Surgery remains the primary treatment when dealing with an apparent (intraoperative assessment in the absence of histopathological diagnosis support) FIGO stage 1 disease, often the gynaecologist or gynae-oncologist must decide upon a conservative surgery (uterus and at least 1 part of the ovary left behind) or a more radical approach. Radical surgery with complete staging includes midline laparotomy, complete inspection, palpation of the abdominal cavity, cytology, resection of all suspicious

tissue, bilateral salpingo-oophorectomy, total hysterectomy, omentectomy and multiple peritoneal biopsies. Since peritoneal implants carry prognostic value and upstaging effect on BOTs, it is not uncommon for the trained gynae-oncologist to do a staging laparotomy with fertility sparing surgery or radical surgery based on the operative findings. The Retrospective Multicentre Outcome Survey in Borderline Tumours (ROBOT) study has shown that surgical staging is a significant prognostic factor regarding relapse (hazards ratio [HR], 0.443; 0.222-0.884; P=0.0209)[5]. Intraoperative frozen section laboratory services, where available, may also influence the nature and extent of surgery[6].

Unilateral salpingo-oophorectomy (SO) and full laparotomy staging appears to be an option in fertility-concerned individuals. Ovarian cystectomy may be considered depending on the operative findings (as usually it's a hindsight postoperative histopathological diagnosis), but the recurrence rate of either ipsilateral or contralateral ovary post cystectomy is approximately 12-36%[7,8,9]. Systematic pelvic lymphadenectomy for BOTs has little prognostic value and of low incidence involvement, with a meta-analysis review of 97 studies reporting 98 percent survival at 6.5 years in women with lymph node involvement[10]. At present, there is little rationale for routine systematic pelvic or paraaortic lymphadenectomy for BOTs.

Staging laparoscopy in a suspected stage I BOT seems to be acceptable in selected patient and disease profiles, but an apparent higher stage disease would warrant an open laparotomy conversion[11]. In advanced disease stages, all visible tumours should be removed if feasible. Although the progression free survival may not be significantly improved, compared to FIGO stage 1, stages II and III have a significantly higher risk of recurrence with HR of 2.489 (1.444–4.289; p = 0.001) and 2.483 (1.511–4.080; p = 0.0003), respectively[5].

The Gynaecologic Cancer Inter Group (GCIG) consensus does not recommend adjuvant chemotherapy in BOTs given the lack of any beneficial response[5]. However, patients with serous-BOTs with peritoneal implants may require individual assessment and multidisciplinary decisions regarding this approach. There is no proper standard consensus regarding postoperative surveillance frequency or duration, and it is usually individualised. Risk of relapse in BOTs, particularly those with conservative surgery or peritoneal implants, is highest in the first 2 years (31.8%) and persists up to 10 years (10.4 %)[13].

Surgical cytoreduction is a consideration in relapsed disease but again, an individualised decision. Observational data suggest improved patients' overall survival of 61 months with optimal resection versus 26 months with suboptimal resection[14]. 30% of relapse BOTs show malignant transformation and carry poor prognosis, particularly those of high grade invasive ovarian cancer (P < 0.0001; HR, 26.0; 5-year survival rates of 98% vs 50%)[5,12].

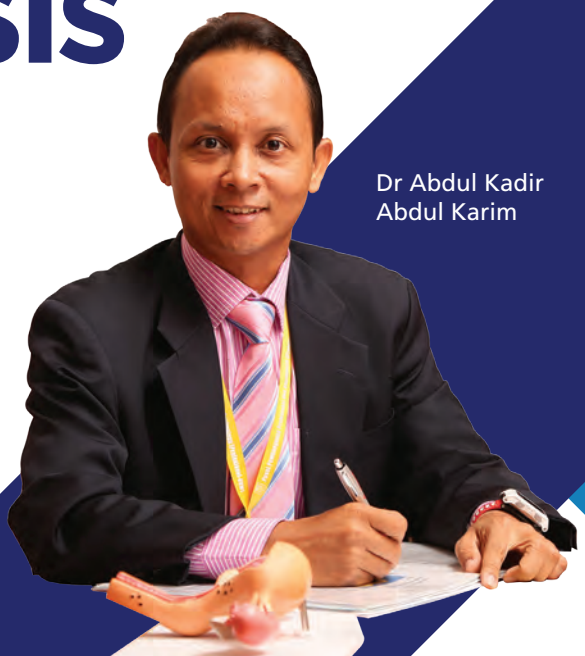
Surgery remains the cornerstone of treatment for BOTs. FIGO stage 1 disease tends to have an overall good prognosis but long-term surveillance is still necessary, especially for those who received fertility sparing surgery due to concerns of relapse. Higher stage disease with relapse, invasive peritoneal implants and microinvasion changes carry poor prognosis. Secondary cytoreductive surgery remains an option in carefully selected patients, although the effect on the overall survival is yet to be established.

References

1. *Taylor HC. Malignant and semi malignant tumours of the ovary. Surg Gynecol Obstet 1929;48:204-30.*
2. *International Federation of Gynaecology and Obstetrics: Classification and staging of malignant tumours in the female pelvis. Acta Obstet Gynecol Scand 1971;50:1-7.*
3. *Serov SS, Scully RE, Sobin LH (eds) (1973). Histological typing of ovarian tumors. Springer, Berlin Heidelberg New York for WHO, Geneva.*
4. *Kurman RJ, Carcangiu ML, Herrington CS, Young RHE (eds) (2014). WHO classification of tumours of female reproductive organs. Lyon, IARC.*
5. *Du Bois A, Ewald-Riegler N, de Gregorio N, et al. Borderline tumours of the ovary: A cohort study of the Arbeitsgemeinschaft Gyna¨kologische Onkologie (AGO) Study Group. Eur J Cancer 2013;49:1905Y1914.*
6. *Md Arshad NZ, Ng BK, Md Paiman NA, Abdullah Mahdy Z, Mohd Noor R. Intra-Operative Frozen Sections for Ovarian Tumors – A Tertiary Center Experience. Asian Pac J Cancer Prev. 2018;19(1):213-18.*
7. *Boran N, Cil AP, Tulunay G, et al. Fertility and recurrence results of conservative surgery for borderline ovarian tumors. Gynecol Oncol 2005; 97:845.*
8. *Morice P, Camatte S, El Hassan J, et al. Clinical outcomes and fertility after conservative treatment of ovarian borderline tumors. Fertil Steril 2001; 75:92.*
9. *Suh-Burgmann E. Long-term outcomes following conservative surgery for borderline tumor of the ovary: A large population-based study. Gynecol Oncol 2006;103:841.*
10. *Lesieur B, Kane A, Duvillard P, et al. Prognostic value of lymph node involvement in ovarian serous borderline tumors. Am J Obstet Gynecol 2011; 204:438.e1.*
11. *Odegaard E, Staff AC, Langebrekke A, et al. Surgery of borderline tumors of the ovary: Retrospective of short-term outcome after laparoscopy or laparotomy. Acta Obstet Gynecol Scand 2007;86:620Y626.*
12. *Harter P, Gershenson D, Lhomme C, et al. Gynecologic Cancer InterGroup (GCIG) Consensus Review for Ovarian Tumors of Low Malignant Potential (Borderline Ovarian Tumors). Int J Gynecol Cancer 2014;24(9 Suppl 3):S5-8.*
13. *Du Bois A, Ewald-Riegler N, du Bois O, et al. Borderline tumors of the ovary Va systematic review [in German]. Geburtsh Frauenheilk. 2009;69:807Y833.*
14. *Bristow RE, Gossett DR, Shook DR, et al. Recurrent micropapillary serous ovarian carcinoma. Cancer 2002; 95:791.*

Progesterone based Treatment in Endometriosis

Dr Abdul Kadir
Abdul Karim



Endometriosis is characterised by chronic inflammation and growth of endometrial cells outside the uterine cavity. There has been no local data regarding the prevalence of endometriosis in Malaysia, however, extrapolated data based on statistics estimate it at almost 1.2 million sufferers. Endometriosis is more commonly seen in patients with infertility, with some series reporting a prevalence of up to 50%.

The etiology of endometriosis is multifactorial. The most well-known cause is Sampson's theory of retrograde menstruation. However, this does not explain why only 10-12 percent of the population has endometriosis despite almost 90 percent of women having retrograde menstruation. Endometriosis is undoubtedly an oestrogen dependant disorder as it propagates the disease.

Progesterone is a steroid hormone which is secreted by the corpus luteum after ovulation as the endometrium enters secretory phase. This counteracts the effect of oestrogen, which proliferates the endometrium and stimulates tissue remodelling until pregnancy occurs or until menstrual shedding. In the endometrium, progesterone stimulates the expression of enzyme 17HSDB2 in epithelial cells. During the luteal phase, this enzyme catalyses the conversion of biologically active oestrogen (E2) to less estrogenic steroid estrone (E1) and testosterone to androstenedione. This effect is however blocked by local endogenous E2 in endometriotic lesions. This results in the incomplete transition of the endometrium, from proliferative to secretory phase of the endometrial cells, which may enhance the survival and implantation of refluxed endometrium. The conversion of potent oestrogen E2 to E1 in the secretory phase endometrium is regarded as a critical protective mechanism against oestrogen-induced growth.

Progesterone resistance is one of the causes of endometriosis. It is explicable by the extremely low Progesterone Receptor (PR) levels in the endometriotic tissue. Drugs that have an effect on progesterone secretion and/or PR activity are progestin via several routes, anti-progestin and SPRM. The latter two have been evaluated in a recent Cochrane review.

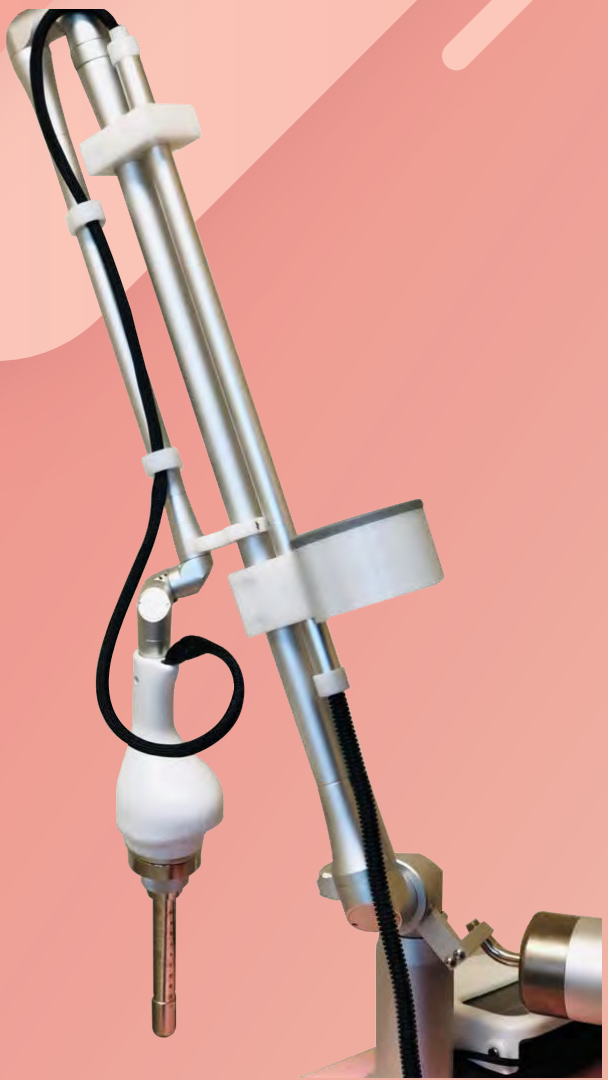
Progestins are synthetic compounds that mimic the effect of progesterone. There is a wide spectrum of these steroids derived from different parent compounds. Progestin can be classified according to their chemical structure, chemical classification or route of administration. Amongst the progestins, norethisterone acetate and depot medroxy progesterone acetate are available and approved by the USFDA for endometriosis. Other progestins that have been used and showed benefit include cyproterone acetate, dienogest, dydrogesterone, etogestrel (subdermal implants) and levonogestrel (intrauterine system). There have been numerous clinical studies using these progestins in the endometriosis cohort. The evidence varies in quality, but a vast majority looks at reduction of pain as the primary outcome measure. Besides the ability to reduce pain, other outcome measures include improvement in dyspareunia, dyschezia, premenstrual pain, enhancing health-related quality of life, minimising the size of deep endometriosis and reducing the occurrence rate of endometrioma. In making a choice for treatment, the factors that must be considered are the side effects, compliance of patients, cost and additional benefits of the progestin of choice.

Medical management is still an attractive option for handling endometriosis as it avoids surgical complications, especially preserving ovarian function. Hormonal therapy remains the mainstay of medical treatment.

Progesterone resistance is touted as one of the important causes of endometriosis. Thus, manipulation of PRs by medical therapy for the improvement of endometriosis symptoms has shown to be effective. Progestins are an effective form of medical treatment with a variety of derivatives and multiple routes of administration. All carry progestogenic effects and benefits toward endometriotic lesion and its associated symptoms. Recent evidence of variable quality clinical studies has shown and confirmed most benefits that were already known, with new concerns regarding their effects on BMD in the adolescent group.

Dr Bahiyah Abdullah

Vaginal Laser Therapy: What is the Evidence?



There has been significant technological advancement in the field of medicine; urogynaecology is no exception. Fancy and sophisticated treatments tend to lure women (and doctors), hoping for a simple yet effective solution to fix their pelvic health issues.

Nowadays, the advertisement for vaginal laser treatment is on the rise. It promises women to treat their various concerns, ranging from loose vagina (associated with reduced sexual satisfaction), stress, urinary incontinence, vaginal atrophy and genitourinary symptoms due to menopause. Vaginal laser therapy is currently portrayed as a magic potion that can fix everything! Despite its increasing popularity, one can't help but wonder: has vaginal laser therapy been proven to be safe and effective?

Most vaginal laser therapies intended to treat various pelvic floor disorders are performed by any general doctor, plastic surgeon and even an aesthetician who are not trained as either gynaecologists or urogynecologists. Is this trend acceptable?

Let's see what the evidence says:

There are two main types of laser currently offered in the market: the fractional microablative CO2 laser and the non-ablative photothermal erbium: YAG laser. Prospective observational studies have demonstrated histological changes after the use of microablative fractional CO2 laser vaginally in atrophic conditions. Increased collagen and extracellular matrix production have been reported together with an increase in the thickness of the vaginal epithelium with the formation of the new papilla[1]. The non-ablative vaginal Er: YAG laser (VEL) which has more absorption, less thermal diffusion and less tissue necrosis[2], also induce morphological changes in vaginal tissues which are not only able to alleviate vaginal dryness and dyspareunia, but also improve stress urinary incontinence as well as vaginal prolapse[3].

Other studies had reported that both CO2 and Er: YAG laser provide a significant improvement in vesicovaginal atrophy (VVA) assessed subjectively (with a 10-point visual analogue scale) and objectively (using the Vaginal Health Index, VHI). Sexual function and quality of life were also significantly improved[4].

There is also a pilot study comparing VEL and vaginal estriol on genitourinary syndrome of menopause, which both demonstrated significant improvement in their VHI scores. However, VEL displayed more long-lasting effect as it maintained the same positive result throughout the 6-month follow-up; whereas a reduction in efficacy can be seen 12 weeks after the end of treatment with vaginal estriol. VEL also had an improved ICIQ-SF score and was better tolerated[5]. The use of VEL has been further studied among 16 breast cancer survivors who had VVA, however, hormone therapy was contraindicated and 94% were satisfied with symptom relief. Hence, it has high potential as an alternative treatment for this group of women[6].

Unfortunately, we still lack high-quality evidence concerning vaginal laser therapy. Most available studies are limited by their design (lack of control group, no randomisation, follow-up is short term, small sample size or lack of comparison with standard treatment) and they often possess conflict of interest as they are usually sponsored by the industry.

Even though previous studies had reported no adverse effect, a recently published case series described complications of vaginal laser therapy which included vaginal stenosis, a formation of the fibrous band in the vagina, and worsening dyspareunia[7]. Hence, vaginal laser therapy is not without risk and to date, there is still a lack of biological plausibility and safety data regarding its application.

The International Urogynaecological Association (IUGA), International Continence Society (ICS) and the United States Food and Drug Administration (FDA) have a consensus in their stand on the use of laser-based vaginal devices for treatment of various pelvic floor problems[8,9]. A warning for false advertising and the use of energy-based devices has been issued. Well-designed studies are required to further investigate the potential benefits, harm and efficacy of laser therapy in the treatment of genitourinary syndrome of menopause, vaginal laxity and stress urinary incontinence. The therapeutic advantages of nonsurgical laser-based devices in urogynaecology can only be recommended after robust clinical trials have demonstrated their long-term complication profile, safety and efficacy[8].

We are practising in the era of evidence-based medicine, thus, we should uphold it. We should follow what the panel of experts recommend after reviewing all the pieces of literature to date. Moreover, it is clear that we do not have adequate good-quality evidence to support the efficacy of vaginal laser therapy in treating pelvic floor disorder, and the significant harmful effect due to the procedure is real. More well-designed trials are required and even essential to shed further light on whether this high-potential invention can be an acceptable standard management option.

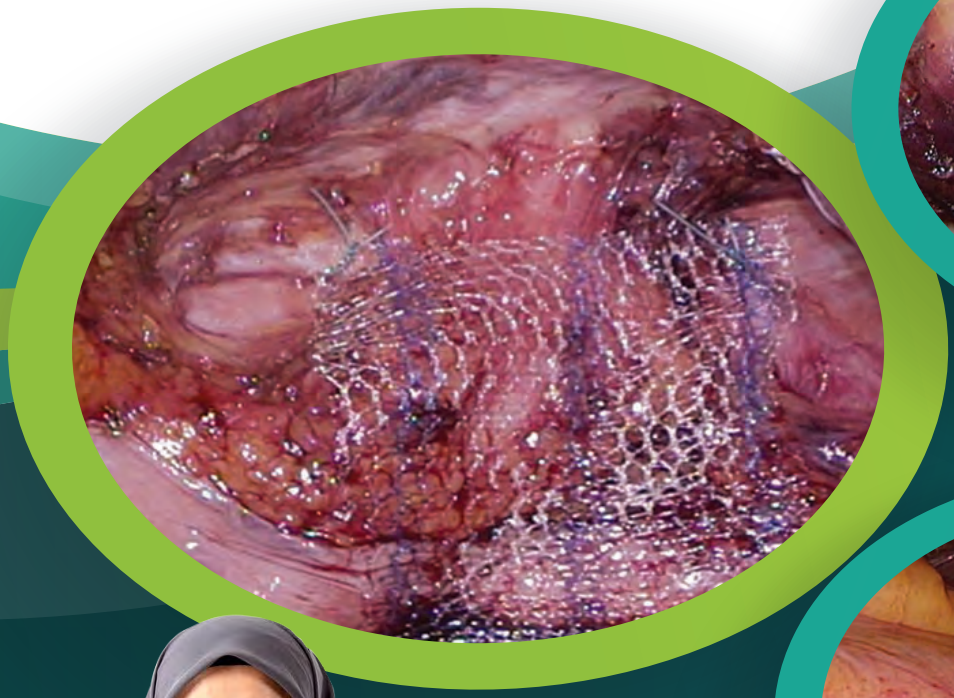
In addition, this procedure should be done by someone who understands the pathophysiology of the illness and is able to perform a complete assessment, formulating a correct diagnosis and offering the best treatment option that suits the patient. This makes training and credentialing crucial components that must be emphasised before allowing anyone to perform the procedure.

We are the advocates of health and bound by ethical principles and code of practice. We, too, had solemnly taken our oath to 'first do no harm'. It is unethical to misuse patients' trust and take advantage by subjecting them to an intervention with unclear evidence of safety and efficacy, and out of research context.

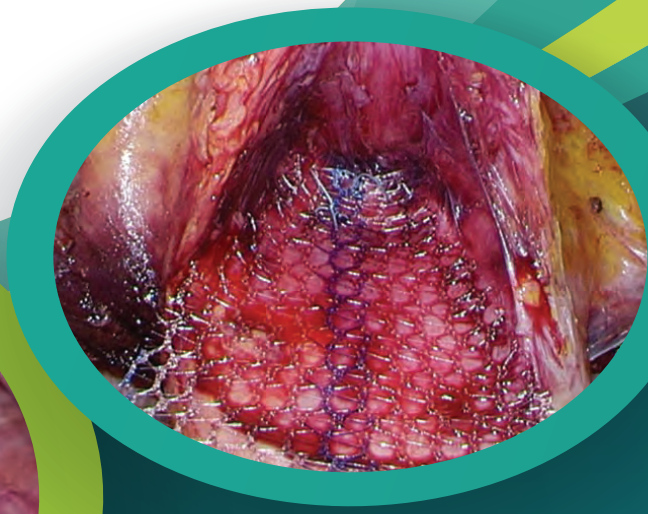
We should not allow our patient management to be dictated by the industry; instead, we should work closely together with the industry to ensure that advancement in technology is used appropriately (by offering expert advice, conducting research, etc.) to achieve effective therapy that will benefit women without compromising their safety. We should be firm in our stand on vaginal laser therapy and not mislead our patients when offering it by using low-quality evidence in counselling.

References

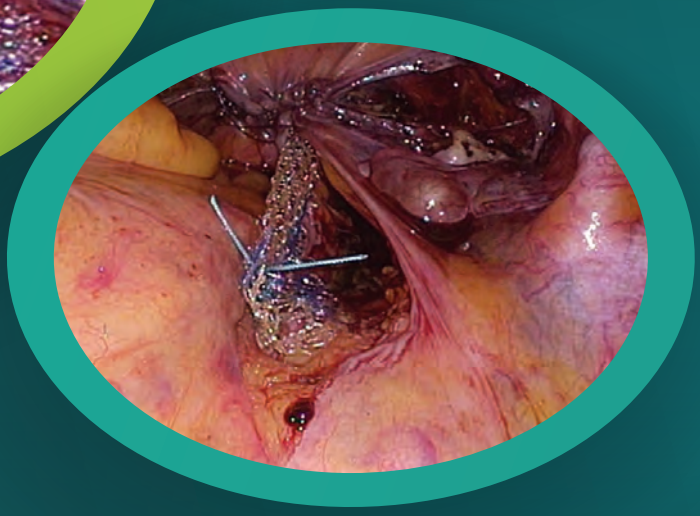
1. *Salvatore, S., S. Athanasiou and M. Candiani. The use of pulsed CO2 lasers for the treatment of vulvovaginal atrophy. Curr Opin Obstet Gynecol. 2015;27(6):504-8.*
2. *Hardaway, C.A. and E.V. Ross. Non-ablative laser skin remodelling. Dermatol Clin. 2002; 20(1):97-111.*
3. *Gambacciani, M. and S. Palacios. Laser therapy for the restoration of vaginal function. Maturitas. 2017;99:10-5.*
4. *Bhide, A.A., et al. The use of laser in urogynaecology. Int Urogynecol J. 2018. https://doi.org/10.1007/s00192-018-3844-7.*
5. *Gambacciani, M., M. Levancini and M. Cervigni. Vaginal erbium laser: The second-generation thermotherapy for the genitourinary syndrome of menopause. Climacteric. 2015; 18(5):757-63.*
6. *Mothes, A.R., M. Runnebaum and I.B. Runnebaum. Ablative dual-phase Erbium: YAG laser treatment of atrophy-related vaginal symptoms in post-menopausal breast cancer survivors omitting hormonal treatment. J Cancer Res Clin Oncol. 2018;144(5):955-60.*
7. *Gordon C, Gonzales S and Krychman ML. Rethinking the techno vagina: A case series of patient complications following vaginal laser treatment for atrophy. Menopause. 2019;26(4):423-427.*
8. *Shobeiri SA, Kerkhof MH, Minassian VA and Bazi T. IUGA committee opinion: Laser-based vaginal devices for treatment of stress urinary incontinence, genitourinary syndrome of menopause, and vaginal laxity. Int Urogynecol J. 2019;30(3):371-6.*
9. *Digesu GA, Tailor V and Preti M, et al. The energy-based devices for vaginal "rejuvenation", urinary incontinence, vaginal cosmetic procedures, and other vulvo-vaginal disorders: An international multidisciplinary expert panel opinion. Neurourol Urodyn. 2019;38(3):1005-8.*



Dissection of rectovaginal space with mesh attached at puborectalis muscle bilaterally



Anterior paravaginal fascia dissection with anterior mesh placement



Mesh attached at sacral promontory with suture with prolapse suspended (prior to full closure of the peritoneum)

Dr Ida Lilywaty Md Latar

Laparoscopic Sacrocolpopexy - Another Dimension of Prolapse Surgery

Pelvic organ prolapse (POP) is generally not life threatening but is one of the common diseases that decrease women's quality of life. The Women's Health Initiative (WHI) reported that 41% of women aged 50 to 79 years show some degree of POP, including cystocele (34%), rectocele (19%), and uterine prolapse (14%)[1]. Latest study has reported that women's lifetime risks of surgery for incontinence and/or POP by the age of 80 were 20.0%[2].

Abdominal sacrocolpopexy (ASC) is one of the most effective surgical procedures, especially in women who wish to remain sexually active. Eventhough vaginal approaches with or without use of mesh represent the main choice for most urogynecologists, sacrocolpopexy as an alternative has widen the horizon for management of women with POP since its introduction in 1962. Large series have confirmed that sacrocolpopexy has a success rate between 74-98% and is associated with lower rates as well as greater time of recurrence of vaginal vault prolapse and less dyspareunia than vaginal surgeries including sacrospinous fixation[3].

Keeping up with the advances and demand of minimally invasive surgeries globally, urogynaecology surgeons starts to develop and improve their laparoscopic skills and techniques to make sacrocolpopexy less invasive. Furthermore, following the Food and Drug Administration (FDA) public health notification regarding transvaginal synthetic mesh repair of vaginal prolapse in 2008 and 2011, there has been a significant increase in uptake of laparoscopic sacrocolpopexy (LSC) globally as one the techniques for prolapse repair.

LSC appears to be feasible and effective in treatment of not only apical vaginal defects but also multicompartment POP[4]. However, despite the robust data supporting its efficacy, the rate of LSC compared to the vaginal surgeries for prolapse repair is still lower. The main reason for this disaffection is the perceived technical difficulty of the procedure compared to the assumed easiness of the vaginal techniques. In addition to this, there are significant variations in indications for, and in nearly every aspect of the procedure. Learning how to perform LSC is associated with two types of challenges: anatomic and technical. Published experience with LSC remains limited, because of the inherent need for endoscopic suturing skills causing a long learning curve and operation time. An experience in a span of ten years in a single centre demonstrated a learning curve of 60 cases, which is relatively high. Operation time declined rapidly over the first 30 procedures, declining slower thereafter to reach a steady state only after 90 cases[5].

Major perioperative complications were bladder, bowel and vessel injuries. One of the largest retrospective series available with 363 patients demonstrated a total complication rate of 15.5%, due to 6% urge incontinence, 4% prolapse relapse; 2% open surgery conversion; 1% of mesh erosion, 0.6% off mesh infection and urinary retention, 0.3% of spondylitis, port hernia and intestinal obstruction. The highest mesh erosion rates (8.7 and 9%) and the average incidence of mesh erosion after LSC is 2.7%. Postoperative sexual dysfunction was seen in 7.8% of the patients submitted to LSC and 9.8% of them had bowel dysfunction, which included constipation, anal pain and faecal incontinence. The complications, objective and subjective successes are not statistically different among LSC and ASC[6].

There are expectedly many variations in LSC techniques. These include number and placement of trocars; use of special retractors; mesh type, shape and number, mesh tension, placement and attachment, use of staples or suturing either intra or extra corporeal, peritonealization, concomitant anti-incontinence, hysterectomy and vaginal procedures. Which technique is best is still controversial. Through observation, one would see that the variation in techniques tends to run along particular centre, country and region. Some are more extensive and meticulous in tissue dissection, making the operating time longer and some tends to put more emphasize in shortening the time for surgery and performing less extensive tissue dissection. With increasing number of cases by the years, surgeons around the world are putting more efforts in reviewing each steps of their techniques in LSC aiming at shortening the operating time without compromising its effectiveness and maintaining its safety[7].

In conclusion, embracing the skills of laparoscopic sacrocolpopexy with rational selection of patient offers another dimension of effective and safe surgical management for POP. However, the lengthy learning curve associated with this may represent a barrier to the uptake of this technique. Nevertheless, through sharing of experience and apprenticeship programme globally, surgeons performing LSC gets more versatility in their skills with the fine balance of maximum surgical outcome, lesser complications with shorter operating time.

References

1. *Hendrix SL, Clark A, Nygaard I, Aragaki A, Barnabei V, McTiernan A. Pelvic organ prolapse in the Women's Health Initiative: gravity and gravidity. Am J Obstet Gynecol. 2002; 186:1160-1166*
2. *Wu JM, Matthews CA, Conover MM, Pate V, Jonsson Funk M. Lifetime risk of stress urinary incontinence or pelvic organ prolapse surgery. Obstet Gynecol. 2014;123:1201–1206.*
3. *Gabriel B, Nassif J, Barata S, Wattiez A. Twenty years of laparoscopic sacrocolpopexy: where are we now? Int Urogynecol J Pelvic Floor Dysfunct. 2011;.*
4. *Gadonneix P, Ercoli A, Salet-Lizee D, et al. Laparoscopic sacrocolpopexy with two separate meshes along the anterior and posterior vaginal walls for multicompartment pelvic organ prolapse. J Am Assoc Gynecol Laparosc. 2004;11: 29e35*
5. *Claerhout F, Roovers JP, Lewi P, Verguts J, De Ridder D, Deprest J. Implementation of laparoscopic sacrocolpopexy--a single centre's experience. Int Urogynecol J Pelvic Floor Dysfunct. 2009;20(9):1119-25.*
6. *Rozet F, Mandron E, Arroyo C, Andrews H, Cathelineau X, Mombet A, Cathala N, Vallancien G. Laparoscopic sacral colpopexy approach for genito-urinary prolapse: experience with 363 cases. Eur Urol. 2005;47(2):230-6.*
7. *How to reduce the operative time of laparoscopic sacrocolpopexy? Hoshino K, Yoshimura K, Nishimura K, Hachisuga T. Gynecol Minim Invasive Ther. 2017;6(1): 17–19.*

Borderline Ovarian Tumour

Dr Jamil Omar

Borderline ovarian tumour (BOT) was first described by Taylor in 1929 of a woman with disseminated ovarian metastases but survived many years after the first diagnosis[1]. In 1961 International Federation of Gynecology and Obstetrics (FIGO) accepted this group of tumour as BOT, and later accepted by the World Health Organization in 1973[2].

They may have operative appearance of a malignant epithelial ovarian tumour and microscopically has features of malignancy i.e. nuclear atypia, cellular proliferation, stratification of the epithelial lining of the papillae and high mitotic activity, but without stromal invasion. Microinvasion if presence, it should be less than 5 mm in greatest dimension[3].

They represent about 10–20% of all epithelial ovarian tumours. The majority of BOTs are serous tumors (53.3%) and mucinous tumors (42.5%). Most BOTs are diagnosed at an early stage (75% at FIGO stage 1)[4]. BOTs have an excellent prognosis. Women with stage 1 borderline tumors have an excellent 5-year survival rate of approximately 95–97%; however, late recurrence leads to a 10-year survival rate of only 70–95%[5].

Serous borderline tumours are bilateral in about one-third of cases. Extra-ovarian spread as peritoneal implants is frequent (35%). Most implants are non-invasive, but invasive implants are found in (15–25%) of cases. Invasive implants may progress to invasive carcinoma, whereas most peritoneal implants will remain stable or regress after removal of the main ovarian tumour[6].

Mucinous borderline tumours are histologically classified as intestinal (85% of mucinous BOT) or endocervical (15% of mucinous BOT). The ovarian tumours of the intestinal subtype can be large, and are nearly always unilateral. In case of bilaterality, the woman should be further examined for a primary intestinal tumour. The endocervical subtype might be bilateral and associated with endometriosis and mixed-BOT[7].

Standard management of BOT is peritoneal washing cytology, hysterectomy, bilateral salpingo-oophorectomy, omentectomy, complete peritoneal resection of macroscopic lesions and in case of mucinous BOTs (mBOT), appendectomy should be performed[5]. However in young patient where fertility is concerned, unilateral salpingo-oophorectomy, omentectomy and fluid for cytology is adequate.

The rate of recurrence is generally increased in the fertility-sparing approach, between (12 – 58%), compared with 5% in radical surgery[8]. However, numerous studies have demonstrated the safety of conservative surgery, with favourable prognosis

and comparable survival rate for conservative or radical surgery[9]. Intraoperative frozen section diagnosis of BOT is often difficult, even for experienced pathologists[10].

About 27–54% of women are younger than 40 years at diagnoses. Thus, fertility-sparing surgery is always a consideration in the management of patients with BOT, which is performed by the preservation of the uterus and at-least part of one ovary[11]. The consensus is that the fertility-sparing approach can be safely attempted up to FIGO stage 1C. Although some existing reports have indicated that using infertility drugs may increase the risk of BOT, no conclusions were drawn due to study limitations, such as short follow-up period, low statistical power, and the absence of control groups[12]. Therefore, until a future large-scale prospective study is published, attempting pregnancy without ovulation induction is recommended. In cases where ovulation induction is needed, extremely careful follow-up will be necessary.

Laparotomy is a standard approach for the staging of large ovarian tumours. Laparoscopic approach has not been evaluated in randomized trials. In general, retrospective series have reported that cyst rupture was more likely and complete staging was less likely with laparoscopic surgery than laparotomy, but there was no difference in recurrence rate[13].

Chemotherapy is rarely indicated for women with borderline ovarian tumors. While most clinicians would agree that there is no advantage for chemotherapy in women with early-stage, completely resected disease[14], its use for women with more advanced-stage disease is still controversial[15].

The Society of Gynecologic Oncology (SGO) and National Comprehensive Cancer Network (NCCN) have each published guidelines for post-treatment surveillance for women with ovarian cancer[16], and it is reasonable to extrapolate them for women with borderline tumours.

The general recommendation is follow up every 3 months during the first 2 years and then every 6 months for the next 3 years and annually thereafter. The women is followed with pelvic examination, transvaginal ultrasound and CA125 measurement. In mucinous BOT, CEA would be recommended[17].

Conclusion

BOTs have good prognosis that account for 10–20% of all epithelial ovarian tumours. In cases of mBOT, women are also treated with appendectomy. As one-third of BOTs are diagnosed in women younger than 40 years, fertility-sparing treatment by performing cystectomy or unilateral salphingo-oophorectomy with omentectomy is acceptable. Fertility drugs are well tolerated in women with infertility after fertility-sparing surgery but need close monitoring. Careful selection of candidates is necessary. Laparoscopic techniques can be used, but are reserved for trained oncologic surgeons. Conservative surgery increases the rate of recurrence but without any effect on survival. The spontaneous pregnancy rate is nearly 50%, and most are achieved spontaneously.

References

1. *Taylor HC. Malignant and semi-malignat tumours of the ovary. Surg Gynecol Obstet 1929;48:204-230.*
2. *Sutton GP. Ovarian tumors of low malignant potential. In: Rubin SC, Sutton GP, editors. Ovarian cancer. 2nd ed. Philadelphia: Lippincott Williams & Wilkins; 2001. p. 399-417.*
3. *Silverberg SG, Bell DA, Kurman RJ, Seidman JD, Prat J, Ronnett BM, et al. Borderline ovarian tumors: key points and workshop summary. Hum Pathol. 2004;35(8):910–917.*
4. *Daniela Fischerova, Michal Zikan, Pavel Dundr, David Cibula, et al. Diagnosis, Treatment, and Follow-Up of Borderline Ovarian Tumors. Oncologist. 2012;17(12): 1515–1533.*
5. *Seok Ju Seong, Da Hee Kim, Mi Kyoung Kim, Taejong Song, et al. Controversies in borderline ovarian tumors. J Gynecol Oncology. 2015 Oct;26(4):343-349.*
6. *Tropé CG1, Kaern J, Davidson B, et al. Borderline ovarian tumours. Best Pract Res Clin Obstet Gynaecol. 2012 Jun;26(3):325-36.*
7. *Lalwani N, et al. Current update on borderline ovarian neoplasms. AJR Am J Roentgenol. 2010;194:330–6.*
8. *Tavassoli FA, Devilee P. World Health Organization classification of tumours. Tumours of the breast and female genital organs. Pathology and Genetics. Lyon: IARC Press, 2003.*
9. *Serov SF, Scully RE & Sobin LH. International histological classification of tumors, no 9. Histological typing of ovarian tumours. Geneval: World Health Organization, 1973.*
10. *Zhen Huang, Li Li, ChengCheng Li, Samuel Ngaujah, Shu Yao, Ran Chu, Lin Xie, XingSheng Yang, Xiangning Zhang, Peishu Liu, Jie Jiang, Youzhong Zhang, Baoxia Cui, Kun Song, Beihua Kong et al. Diagnostic accuracy of frozen section analysis of borderline ovarian tumors: a meta-analysis with emphasis on misdiagnosis factors. J Cancer. 2018; 9(16): 2817–2824.*
11. *Song T, et al. Fertility-sparing surgery for borderline ovarian tumors. Oncologic safety and reproductive outcomes. Int J Gynecol Cancer. 2011;21:640–6.*
12. *Fortin A, et al. Impact of infertility drugs after treatment of borderline ovarian tumors: results of a retrospective multicenter study. FertilSteril. 2007;87:591–6.*
13. *Desfeux P, Camatte S, Chatellier G, et al. Impact of surgical approach on the management of macroscopic early ovarian borderline tumors. Gynecol Oncol 2005; 98:390.*
14. *Tropé C, Kaern J, Vergote IB, et al. Are borderline tumors of the ovary overtreated both surgically and systemically? A review of four prospective randomized trials including 253 patients with borderline tumors. Gynecol Oncol 1993; 51:236.*
15. *Karin K. Shih a , Qin C. Zhou b , Carol Aghajanian c , Jae Huh a , Robert A. Soslow d , Jessica C. Morgan a , Alexia Iasonos b , Dennis S. Chi a , Richard R. Barakat a , Nadeem R. Abu-Rustum a, et al. Patterns of recurrence and role of adjuvant chemotherapy in stage II–IV serous ovarian borderline tumors. J Gynecol Oncology. 2010 Aug; 119: 270–273.*
16. *https://www.nccn.org/professionals/physician_gls/default.aspx (Accessed on February 08, 2019).*
17. *Salani R, Khanna N, Frimer M, et al. An update on post-treatment surveillance and diagnosis of recurrence in women with gynecologic malignancies: Society of Gynecologic Oncology (SGO) recommendations. Gynecol Oncol 2017; 146:3.*

ICOE Book Award

The iCOE program was first introduced in 2014 as an improved and more dynamic version of the previous LSSC course that OGSM ran previously. As part of the course material, the iCOE handbook was designed as an 'all you need to know' reference which was evidence-based and extremely reader-friendly.

OGSM is delighted that the iCOE handbook was recently awarded the 'Best Medical Book for 2019'. We congratulate the four authors of this very successful publication – Dr Gunasegaran PT Rajan, Dr Tang Boon Nee, Dr Thaneemalai Jeganathan and Dr Muniswaran Ganeshan for bringing glory and recognition to OGSM yet again! "

IOTA Certification Course

The idea of organizing the International Ovarian Tumor Analysis (IOTA) Certification Program was mooted by Dr. Raman when he was the Scientific Chairman of MISCOG 2018. When planning that very large meeting last year, he realized that Dr. Mala Sibal from Bangalore, an accredited trainer, was willing to run a certification program in Kuala Lumpur. Being a strong believer that all good healthcare systems require robust credentialing and re-certification programs, Dr. Raman actively engaged both Dr. Mala as well as key industry sponsors in an effort to organize the course in an efficient and cost-effective manner.

The first OGSM IOTA Certification Course was carried out on Sunday, 3rd March 2019 at Seri Pacific Hotel, Kuala Lumpur. There were a total of 62 participants, of which 59 were Malaysians, while the remaining 3 were from Singapore and Australia. Dr. Mala Sibal kindly consented to conduct the course on behalf of IOTA. We were also fortunate to have obtained an educational grant from GE to help fund some components of the course, thereby allowing course registration fees to be capped. Feedback from the participants was entirely positive and we therefore envision the course becoming a regular feature on the OGSM calendar.

The OGSM PACT team has been very busy since its inception September 2018. To date, we have run 4 trainee updates, a simulated Part 2 examination course, a Part 3 Preparatory Course and a Part 3 Circuits Course.

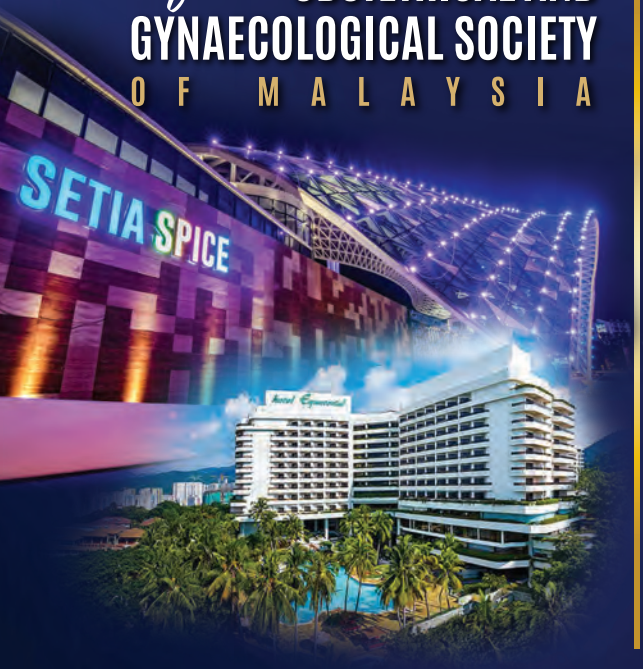
Our inaugural Part 3 Circuits Course was held in the Clinical Skills Unit of Perdana University on 23-24 March 2019. It consisted of 2 full Circuits that simulated exam conditions. Professional actors were hired to simulate patients and they performed above our expectations.

Our courses have always aimed to be relevant to the Malaysian candidate. The course content was only important as a tool to help the candidate identify their weaknesses or gaps in their knowledge. We are proud that our course content were contributed by people who have recently passed their examinations and are thus familiar with the latest requirements from the College. This material underwent a series of stringent vetting process by my team before being used.

I must congratulate my team of young specialists who donated not only their time but also their blood, sweat and tears. PACT would not be possible without their dedication and passion. Special mention must be made of my course coordinators, Dr Loh Huey Wen and Dr Vicky Ho who was also on my vetting committee along with Drs Farah Azura Ab Rahman, Gibran Hashim, Goh Huay-Yee and Lee Lin Ing. They went above and beyond to ensure that the course materials where top notch. The feedback was positive from examiners and participants alike. We are already gearing up for the next Part 3 course slated to be held in 28-29 September 2019.

27TH INTERNATIONAL CONGRESS of the OBSTETRICAL AND GYNAECOLOGICAL SOCIETY OF MALAYSIA

Obstetrical and Gynaecological Society of Malaysia



Prevention, PREDICTION, Precision

Date: 18-21 July 2019

Venue:
Setia SPICE Convention Centre, Penang, Malaysia

Congress Hotel:
Equatorial Hotel Penang

- Shuttle Service will be provided from Congress Hotel
- CPD points will be accredited

CONGRESS HIGHLIGHTS

- Plenary Lectures by renowned Speakers
- 6 Pre-Congress Workshops
- 4 Enrichment Lectures
- 16 Symposiums
- 10 Coffee Conversations
- OGSM Challenge
- Grand Rounds in O&G
- Gala Dinner

SPEAKERS – 32 international speakers & 55 local speakers

TOPICS OF INTEREST TO BE COVERED

- Maternal Fetal Medicine
- Gynae-Oncology
- Paediatric and Adolescent Gynaecology
- Menopause
- Sexual & Reproductive Health
- Urogynaecology
- Quality & Safety
- Benign Gynaecology
- Reproductive Medicine
- Gynaecological Endoscopy

Scan the QR Code or visit our Website for more details
http://ogsm.org.my/ogsm2019/

A Small Pill but A Big Deal

Dr Eeson Sinthamoney

The recent removal of Cytotec (misoprostol) from the Malaysian drug formulary, or better known as the 'Blue Book' has resulted in many of us facing exceptional difficulties.

Cytotec was first marketed in the United States in 1988. It was initially manufactured by G.D. Searle Corp (later known as Pharmacia until it was acquired by Pfizer in 2003. The Searle name was then retired) and was registered in Malaysia in 1989. I remember, as a young Medical Officer in Taiping in the late 1990's being asked by my specialist to buy Cytotec tablets from a small pharmacy in town for RM0.70 per tablet. I cannot recall if this was because Cytotec had not yet been included into the 'Blue Book' or if it was simply because our hospital didn't purchase any. I do however remember that it was far cheaper than the alternative (cervagem) and was certainly as effective in managing missed miscarriages.

Cytotec, as we all know, was approved by the Food and Drug Administration only for treating gastritis and peptic ulcers. However, doctors soon realized that the drug had fascinating effects on the cervix and uterine muscle. Not surprisingly, Cytotec then found a new role in the medical management of miscarriages, termination of pregnancies and for the induction of labour. None of these latter indications were approved in the US and in August 2000, Searle, upon the request of the FDA, wrote to 200,000 healthcare professionals in the US stating their concerns on the lack of research (at that time) on the off-label use of Cytotec.

However, long after Cytotec was replaced by other more efficacious treatment options for gastritis and peptic ulcer disease, its off-label utilization continued to grow. In Malaysia, it was extremely effective and vastly popular for the medical management of miscarriages. It was also common knowledge that Cytotec was widely used for termination of pregnancy. Later, some Obstetricians even used it to induce labour, albeit with occasional sinister consequences.

The evidence supporting the use of Cytotec in the medical management of miscarriages had by then become quite robust and in March 2011 the Malaysian Ministry of Health approved the off-label use of Cytotec for the management of stable first trimester miscarriages.

In January 2012, the Pharmaceutical Services Division of the Malaysian Ministry of Health issued a warning that the use of Cytotec in the management of stable first trimester miscarriages was the only off-label indication allowed and that its use for labour induction was not permitted. This was apparently due to the many reported cases of uterine rupture when Cytotec was used in women with previous Caesarean scars.

At the Malaysian Adverse Drug Reactions Advisory Committee meeting on 9th October 2014, Cytotec was discussed due to 'evidence of widespread off-label use'. The committee recommended that a further detailed review was necessary. A review was subsequently carried out by the National Pharmaceutical Regulatory Agency (NPRA) on 24th November 2014 and several issues were identified.

The review committee noted that while the volume of Cytotec sales had shown an annual rise, the volume sold to private clinics and pharmacies was grossly more than that of government hospitals. For example, in 2013, 6700 tablets were sold to government hospitals whereas the volume of sales was 89000, 238,800 and 296,300 tablets to private hospitals, private clinics and private pharmacies respectively.

This gross disparity in sales volume led the committee to suspect that Cytotec was being widely used for illegal termination of pregnancy. This distrust was fortified both by complaints as well as investigation findings that a large number of private pharmacies with large sales volumes were either not keeping sales records in the prescription book or sold Cytotec without valid prescriptions. Furthermore, there had been several maternal deaths where Cytotec had been used to induce labour and also cases of uterine rupture. The committee had also met with Pfizer, to discuss possible risk management options but were not convinced that a reasonable solution was available.

Subsequent to this review, they then wrote to the Pharmaceutical Services Programme to suggest the withdrawl of registration for Cytotec due to safety concerns. In a letter dated 31st December 2014, the Pharmaceutical Services Programme wrote to inform key Obstetricians in the Ministry of Health of the findings of the review. Soon after, Cytotec was deregistered in Malaysia.

Many of us in the private sector mourn the absence of Cytotec, not because we indulge in termination of pregnancy, nor would we be brave enough to utilize it for induction of labour. The fact of the matter is that Cytotec was the ultimate drug of choice in the medical management of miscarriages. It was simple, effective and cheap. Cervagem costs between RM280 to RM320 per pessary in many private hospitals. The surgical option (ERPOC) costs an estimated RM4500 to RM5000 in most large private hospitals although the surgeon's fee is a mere RM420 (as per the MMA fee schedule).

Furthermore, the absence of legal Cytotec in the market has resulted in its proliferation in the black-market (mostly in cyberspace) and women have now taken to buying the Cytotec online and self-medicating. Certainly, the situation is now ripe for the perfect storm. Are we about to see a rise in morbidity and mortality? But what are we to do? We can certainly appeal the decision by MOH but without proposing robust safeguards that prevent abuse, any such maneuver will inevitably fail.

Perhaps we should all first digest these facts, put on our thinking caps and then hopefully formulate an equitable proposal. We certainly look forward to hearing from you.

Organised by

Obstetrical and Gynaecological Society of Malaysia (OGSM)

Department of Obstetrics & Gynaecology Universiti Kebangsan Malaysia

Co-organised by

Malaysian International Conference on Menopause (MICoM)

6th - 7th July 2019
Le Meridien, Putrajaya

CONFERENCE FEES:

CATEGORIES	INTERNATIONAL DELEGATES	LOCAL DELEGATES	MMS MEMBERS
Specialist / Consultant	USD 300	RM 800	RM 750
Trainee / Medical Officer/GP	USD 250	RM 600	RM 550
Paramedics	USD 250	RM 600	RM 550

The fees are payable via the following methods before **22nd June 2019**
A non-refundable crossed cheque should be made payable to **"MALAYSIAN MENOPAUSE SOCIETY"** or

Bank in directly into:
Bank : **CIMB Malaysia** • Account name : **MALAYSIAN MENOPAUSE SOCIETY** • Account No : **8000 5100 65**

Please email this registration form together with proof of payment to: **micom.mms2019@gmail.com**