EOGS BULLETIN

MAY 2019

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Dr Nandita Palshetkar,
FOGSI President

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ERODE OBSTETRIC AND GYNAECOLOGICAL SOCIETY

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Office Bearers 2019 - 20

Dr. E.S. Usha
President EOGS

Dr. Sri Revathy Sadasivam
Secretary EOGS

Dr. Dharani
Treasurer EOGS

Dr. E.S.Usha
Lotus Hospital,
90, Thayumanavar Sundaram Street,
Kollampalayam, Erode 638002
9952362196
esusha@gmail.com

Dr. Sri Revathi Sadasivam
Maaruthi Medical Centre and Hospitals,
564, Perundurai road,
Erode 638011
98651 96660
sada.reva.9.6.88@gmail.com

Monthly Bulletin of Erode Obstetric and Gynecological Society
Editors: **Dr. E.S. Usha & Dr. N. Poongothai**

ERODE OBSTETRIC AND GYNAECOLOGICAL SOCIETY
ACADEMIC MEET

10.00 am to 11.00 am

Panel 1	:	Preterm Labor
Moderator	:	Dr. Bindhu Menon
11.00 am to 11.15 am	:	Tea Break

11.15 am to 12.00 pm

Panel 2	:	Postpartum Hemorrhage
Moderator	:	Dr. Neetha George

12.00 pm to 12.30 pm

Plenary Lecture	:	Cervical Cerclage – Tips & Tricks and Doing the Right Things
Speaker	:	Dr. Aswath Kumar

12.30 pm to 01.30 pm

Panel 3	:	Scenarios in Day to Day Infertility Practice
Moderator	:	Dr. M. Venugopal Dr. Fessy Louis
01.30 pm	:	Valedictory Followed by Lunch

The Hello Tomorrow CME has been allotted 2 ICOG credit points

Initiative by : Inca Life Sciences A SUN PHARMA division

Date : **19.05. 2019, Sunday**
Time : **10.00 am - 1.30 pm**
Venue : **Hotel Rathna Residency,**
VCTV Road, Erode

Lunch : 1.30 pm - 2.30 pm

Message from the President & Secretary

Dear members,

Happy Mother's Day…

In the recent executive council meeting we started the plans for our EOGS trip. Soon we will inform the dates and probable places.

We also planned to conduct adolescent education programs in the schools during June to August 2019. We request all of you to conduct meetings in few schools nearby and send the details with photos to us.

This month our meeting is a half a day CME with five national faculty and our local vibrant members as panelists.

In this bulletin we have two articles on obstetric topics and one general topic by Dr. Thamilarasi. Requesting more members to contribute.

Dr. E.S. Usha MD., DGO.,
Fellow in fetal medicine
President EOGS

Dr. Sri Revathy Sadasivam MD (OG)., DNB (OG)., MICOG., MRCOG (UK)., Masters in Reproductive Medicine (UK)
Secretary EOGS

PLACENTA ACCRETA SPECTRUM

Introduction

Placenta accrete is defined as abnormal trophoblast invasion of part or all of the placenta into the myometrium of the uterine wall. Placenta accreta spectrum, formerly known as morbidly adherent placenta, refers to the range of pathologic adherence of the placenta, including placenta increta, placenta percreta, and placenta accreta. Maternal morbidity and mortality can occur because of severe and sometimes life-threatening hemorrhage, which often requires blood transfusion.

Risk Factors

- Previous cesarean delivery- the rate of placenta accreta spectrum increases from 0.3% in women with one previous cesarean delivery to 6.74% for women with five or more cesarean deliveries.
- Placenta previa -. Placenta accreta spectrum occurs in 3% of women diagnosed with placenta previa and no prior cesarean deliveries. In the setting of a placenta previa and one or more previous cesarean deliveries, the risk of placenta accreta spectrum is dramatically increased.
- Advanced maternal age,
- Multiparity,
- Prior uterine surgeries or curettage, and Asher-man syndrome
- Abnormal results of placental biomarkers like AFP, PAPP-A, free B-HCG, total placental cell-freemRNA etc are too nonspecific for clinical use.

Diagnosis of Placenta Accreta Spectrum

The primary diagnostic modality for antenatal diagnosis is obstetric ultrasonography.

Women with a placenta previa or a low anterior placenta and prior uterine surgery should have thorough transabdominal and transvaginal sonographic evaluation of the interface between the placenta and myometrium between approximately 18 and 24 weeks of gestation.

• ***Multiple placental lacunae*** – Multiple large, irregular intraplacental sonolucent spaces (placental lacunae) in the center of a lobule or cotyledon adjacent to the involved myometrium replace normal placental homogeneity that give the placenta a "moth-eaten" appearance.

A normal placenta can have vascular lakes, typically a few small, sonolucent spaces with a regular shape and normal underlying myometrial thickness. In contrast, the placental lacunae in PAS are more numerous, irregular in shape, and the underlying myometrium may be thinned.

• ***Disruption of the bladder line*** – Loss or disruption of the normally continuous white line representing the bladder wall-uterine serosa interface (termed the "bladder line") can be caused by placenta percreta or neovascularity related to placenta accreta or increta.

• ***Loss of the clear zone*** – The normal hypoechoic area behind the placenta (termed the "clear space" or "clear zone") may be missing or irregular. This sign can be obscured by direct pressure from the ultrasound probe and bladder filling. It can also be obscured with advancing gestational age and posterior placental location.

• ***Myometrial thinning*** – The retroplacental myometrium can be thin either due to a prior hysterotomy scar or due to placental invasion. When the placenta overlies the region of thinning, then it is important to look for other signs of PAS.

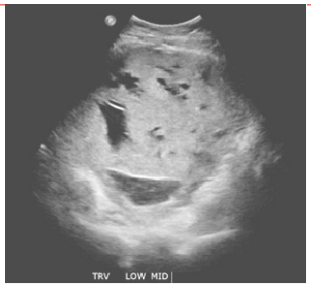
• ***Abnormal vascularity*** – Vessels that extend from the placenta through the myometrium either into the bladder or through the serosa elsewhere are a clear sign of placenta percreta.

• ***Placental bulge –*** A portion of the uterus attached to the abnormally adherent placenta can balloon into the bladder due to weakness of the underlying thin myometrium.

• ***Exophytic mass*** – A focal mass that breaks through the uterine serosa, usually extending into the bladder, is a sign of placenta percreta.

Placenta previa is not a contraindication to transvaginal ultrasonography, and ultrasound examination may provide important information about placenta accreta spectrum and previa in addition to cervical length.

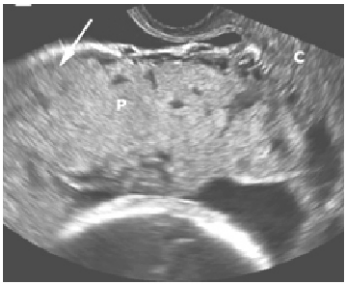
Single venous lake in a normal placenta



Multiple, irregular placental lacunae in placenta accrete

Color Doppler

Color Doppler is useful for confirming the diagnosis of PAS when used in conjunction with the other ultrasound findings described above. Specific findings on color Doppler ultrasonography that suggest this diagnosis include



Loss of the hypo echoic layer of myometrium

- Turbulent lacunar blood flow
- Diffuse or focal intraparenchymal flow
- Hypervascularity of serosa-bladder interface
- Prominent subplacental venous complex

Bridging vessels are color Doppler signals that arise in the myometrium and appear to travel into the bladder and then disappear. They are an ultrasound artifact rather than a true bridge into the bladder. They are seen in cross-sectional images of peritoneal neovascularity caused by dilation of large and deep subplacental myometrial vessels.

Three-dimensional power Doppler ultrasound

Diagnostic criteria include :

- Irregular intraplacental vascularization with tortuous confluent vessels crossing placental width
- Hypervascularity of uterine serosa-bladder wall interface

First trimester findings

Cesarean scar pregnancy when the gestational sac is embedded in the uterine window at the site of a cesarean scar. The risk of placenta

accreta spectrum approaches 100% if the preg-nancy is allowed to continue . Other first trimester features of placenta accreta spectrum visible on ultrasonograpy include a gestational sac that is located in the lower uterine segment and the presence of multiple irregular vascular spaces within the placental bed .

Magnetic resonance imaging

- Dark intraplacental bands on T2-weighted imaging,
- Abnormal bulging of theplacenta or uterus,
- Disruption of the zone between theuterus and the placenta,
- Abnormal or disorganized placental blood vessels .

Magnetic resonance imaging may be useful for diagnosis of difficult cases, such as posterior placenta previa, and to assess depth of invasion in suspected per-creta .

MRI is not the preferred recommended modality for the initial evaluation of possible placenta accreta spectrum

Management

The antenatal diagnosis of placenta accreta spectrum is critical because it provides an opportunity to optimize management and outcomes.

When the diagnosis of placenta accreta spectrum is made in the previable period, it is important to include counseling about the possibility of pregnancy termination for maternal indications given the significant risks of maternal morbidity and mortality.

Timing

34 0/7 to 35 6/7 weeks of gestation is suggested as the preferred gestational age for scheduled caesarean delivery or hysterectomy in a stable patient. Earlier delivery may be required in cases of persistent bleeding, preeclampsia, labor, rupture of membranes, or fetal compromise, or developing maternal comorbidities. Waiting beyond 36 0/7weeks of gestation is not advised because approximately one half of women with placenta accreta spectrum beyond 36 weeks require emergent delivery for hemorrhage.

Antenatal corticosteroids between 23 and 34 weeks of gestation for pregnancies at increased risk of delivery within seven days (eg, antepartum bleeding).

Consideration of bed rest and/or hospitalization in the third trimester,

especially in the setting of vaginal bleeding or residence at a remote distance.

Intraoperative Considerations and Management

The most generally accepted approach to placenta accreta spectrum is cesarean hysterectomy with the placenta left in situ after delivery of the fetus. Attempts at forced placental removal often result in profuse hemorrhage and are strongly discouraged. If an antenatal diagnosis of placenta accreta spectrum is uncertain or the preoperative diagnosis is unclear, a period of intraoperative observation for spontaneous uterine placental separation is appropriate as long as preparations for uterine removal are in place.

Skin incision - many employ vertical incisions for better access and visualization. Reasonable alternatives are wide transverse incisions such as a Maylard or Cherney incision. Whenever possible, the incision in the uterus should avoid the placenta, which sometimes makes a nontraditional incision necessary.

Cystoscopy is sometimes necessary to discern anatomy if bladder involvement is suspected on direct visualization. In most cases when hysterectomy is necessary, a total hysterectomy is required because lower uterine segment or cervical bleeding frequently precludes a supracervical hysterectomy. The role of preoperative placement of catheters or balloons into pelvic arteries for potential interventional radiologic occlusion is controversial. Iliac artery occlusion has been re-ported to decrease blood loss in some but not all case series. Close monitoring of volume status, urine output, ongoing blood loss, and overall hemodynamics is critically important during these cases. Suggested ratios for the use of blood products are a 1:1:1 to1:2:4 of packed red blood cells: fresh frozen plasma: platelets. Prophylactic tranexamic acid given at the time of delivery after cord clamping may reduce the risk of hemorrhage with placenta accreta spectrum.

Stratergies for Uncontrolled pelvic bleeding Hypo-gastric artery ligation, use of interventional radiology to embolize the hypogastric arteries, pelvic pressure packing and aortic compression or clamping.

Postoperative Considerations and Management

Because of the extensive surgery, placenta accreta spectrum patients require intensive hemodynamic monitoring in the early postoperative

period. They are at particular risk of ongoing abdominopelvic bleeding, fluid overload from resuscitation, and other postoperative complications given the nature of the surgery, degree of blood loss,potential for multiorgan damage, and the need for supportive efforts.

Uterine preservation - defined as removal of placenta or uteroplacental tissue without removal of the uterus. For patients with focal placental adherence, removal of the placenta by either manual extraction or surgical excision followed by repair of the resulting defect has been associated with uterine preservation in some cases. Placental removal alone followed by insertion of a Bakri balloon was successful in preventing hysterectomy in some cases.

Expectant management - defined as leaving the placenta either partially or totally in situ. In patients with more extensive placenta accreta spectrum, expectant management is considered an investigational approach. With expectant management, the cord is ligated near the placenta and the entire placenta is left insitu, or only the placenta that spontaneously separates is removed before uterine closure. Risks include bleeding, infection or febrile morbidity. Because of the unproven benefit and possible harm, methotrexate to hasten placental resorption is not recommended .

Delayed Interval Hysterectomy - Delayed interval hysterectomy is a derivative of an expectant approach to placenta accreta spectrum, except that future fertility is not a consideration, and minimizing blood loss and tissue damage are the primary goals. Patients with placenta percreta are optimal candidates for this procedure because they have an increased risk of blood loss and tissue damage if hysterectomy is performed at the time of cesarean delivery.

Conclusion

Placenta accreta spectrum is becoming increasingly common and is associated with significant morbidity and mortality. Knowledge of risk factors and antenatal imaging expertise can help guide the diagnosis. Preparation for delivery and postpartum care should involve a multidisciplinary team.

OBSTETRIC ANAL SPHINCTER - OASIS

Sultan's Classification of Perineal tears:

- ✓ **First-degree tear**: Injury to perineal skin and/or vaginal mucosa.
- ✓ **Second-degree tear**: Injury to perineum involving perineal muscles but not involving the anal sphincter.
- ✓ **Third-degree tear**: Injury to perineum involving the anal sphincter complex:

Grade 3a tear: Less than 50% of external anal sphincter (EAS) thickness torn.

Grade 3b tear: More than 50% of EAS thickness torn.

Grade 3c tear: Both EAS and internal anal sphincter (IAS) torn.

- ✓ **Fourth-degree tear:** Injury to perineum involving the anal sphincter complex (EAS and IAS) and anorectal mucosa.

- Lining of the anal canal varies along its length due to its embryological derivation. The proximal anal canal is lined with rectal mucosa (columnar epithelium) whereas the distal 1–1.5 cm of the anal canal is lined with modified squamous epithelium.
- **OASIS** encompasses both third- and fourth-degree perineal tears.
- **All women having a vaginal delivery are at risk of sustaining OASIS or isolated rectal buttonhole tears. They should therefore be examined systematically, including a digital rectal examination, to assess the severity of damage, particularly prior to suturing.**

Risk factors:

- Asian Ethnicity
- Nulliparity
- Birth weight greater than 4 Kg

- Shoulder Dystocia
- Occipito-Posterior Position
- Prolonged Second Stage Of Labor
- Instrumental delivery

Prevention of OASIS

- Protective effect of **episiotomy** is conflicting.
  - ✓ Mediolateral episiotomy should be considered in instrumental deliveries.
  - ✓ Where episiotomy is indicated, the Mediolateral technique at 60 degree away from midline is recommended when the perineum is distended.
- Perineal protection at crowning can be protective. No difference between 'hands poised' and 'hands on' the perineum as prevention for OASIS.

These include:

- ✓ Left hand slowing down the delivery of the head.
- ✓ Right hand protecting the perineum.
- ✓ Communicate mother not to push when head is crowning.
- ✓ Think about episiotomy (risk groups and correct angle).
- **Warm compression** (holding the compress on the perineum continuously during and between contractions)
- **Perineal massage** during antenatal period and in second stage of **l**abour **–** inconclusive evidence.

Techniques

- Torn Anorectal mucosa should be repaired with 3-0 polyglactin sutures using either the continuous or interrupted technique.
- Torn IAS - interrupted or mattress sutures.
- Full thickness EAS tear, either an overlapping or an end-to-end approximation.

- For partial thickness (all 3a and some 3b) tears, an end-to-end technique should be used.
- When EAS and/or IAS suturing is being performed, either monofilament sutures such as **3-0 PDS** or **modern braided sutures such as 2-0 polyglactin** can be used.
- Figure of eight sutures should be **avoided** during the repair of OASIS because they are haemostatic in nature and may cause tissue ischaemia.
- **Bury** of surgical knots **beneath** the superficial perineal muscles.
- **A rectal examination** should be performed after the repair to ensure that sutures have not been inadvertently inserted through the anorectal mucosa. If a suture is identified it should be removed.
- Broad-spectrum antibiotics.
- Postoperative Laxatives is recommended to reduce the risk of wound dehiscence.
- Physiotherapy.
- Review usually 6–12 weeks postpartum.

Postoperative management

Bulking agents should not be given routinely with laxatives.

Prognosis of surgical repair

60–80% of women are asymptomatic 12 months following delivery and EAS repair.

Future deliveries

- ✓ **Counselled** about the mode of delivery
- ✓ **All women** who have sustained OASIS in a previous pregnancy and who are **symptomatic** or have **abnormal Endoanal Ultrasonography and/or manometry** should be counselled regarding the option of **elective caesarean birth.**

HOW SHOULD WE SLEEP...?

Humans are not sleeping the way nature intended. The numbers of sleep bouts, the duration of sleep, and when sleep occurs have all been comprehensively distorted by modernity.

Throughout developed nations, most adults currently sleep in a monophasic pattern – that is, we try to take a long, single bout of slumber at night, the average duration of which is now less than seven hours. Visit cultures that are untouched by electricity and you often see something rather different. Hunter – gatherer tribes, such as the Gabra in northern Kenya or the San people in the Kalahari Desert, whose way of life has changed little over the past thousands of years, sleep in a biphasic pattern. Both these groups take a similarly longer sleep period at night (seven to eight hours of time in bed, achieving about seven hours of sleep), followed by a thirty – to sixty minute nap in the afternoon.

There is also evidence for a mix of the two sleep patterns, determined by time of year. Pre-industrial tribes, such as the Hadza in northern Tanzania or the San of Namibia, sleep in a biphasic pattern in the hotter summer months, incorporating a thirty to forty minute nap at high noon. They then switch to a largely monophasic sleep pattern during the cooler winter months.

Even when sleeping in a monophasic pattern, the timing of slumber observed in pre industrialized cultures is not that of our own, contorted making. On average, these tribes' people will fall asleep two to three hours after sunset, around nine p.m. Their nighttime sleep bouts will come to an end just prior to, or soon after, dawn. Have you ever wondered about the meaning of the term "midnight"...? It of course means the middle of the night, or, more technically, the middle point of the solar cycle. And so it is for the sleep cycle of hunter – gatherer cultures, and presumably all those that came before. Now consider our cultural sleep norms. Midnight is no longer "mid night." For many of us, mid night is usually the time when we consider checking our email one last time and we know what often happens in the protracted thereafter.

Compounding the problem, we do not then sleep any longer into the morning hours to accommodate these later sleep – onset times. We cannot. Our circadian biology, and the insatiable early-morning demands of a post industrial way of life, denies us the sleep we vitally need. At one time we went to bed in the hours after dusk and woke up with the chickens. Now many of us are still waking up with the chickens, but dusk is simply the time we are finishing up at the office, with much of the waking night to go. Moreover, few of us enjoy a full afternoon nap, further contributing to our state of sleep bankruptcy. The practice of biphasic sleep is not cultural in origin, however. It is deeply biological. All humans, irrespective of culture or geographical location, have a genetically hardwired dip in alertness that occurs in the mid afternoon hours.

Observe any post lunch meeting around a boardroom table and this fact will become evidently clear. Like puppets whose control strings were let loose, then rapidly pulled taut, heads will start dipping then quickly snap back upright. I'm sure you have experienced this blanket of drowsiness that seems to take hold of you, mid afternoon, as though your brain is heading toward an unusually early bedtime. Both you and the meeting attendees are falling prey to an evolutionarily imprinted lull in wakefulness that favors in afternoon nap, called the post-prandial alertness dip (from the Latin prandium, "meal"). This brief descent from high-degree wakefulness to low-level alertness reflects an innate drive to be asleep and napping in the afternoon, and not working. It appears to be a normal part of the daily rhythm of life.

Should you ever have to give a presentation at work, for your own Sake – and that of the conscious state of your listeners – if you can, avoid the mid afternoon slot. What becomes clearly apparent when you step back from these details is that modern society has divorced us from what should be a preordained arrangement of biphasic sleep – one that our genetic code nevertheless tries to rekindle every afternoon. The separation from biphasic sleep occurred at, or ever before, our shift from an agrarian existence to an industrial one.

Anthropological studies of pre-industrial hunter-gatherers have also dispelled a popular myth about how humans should sleep. Around the

close of the early modern era (circa late seventeenth and early eighteenth centuries), historical texts suggest that Western Europeans would take two long bouts of sleep at night, separated by several hours of wakefulness. Nestles in between these twin slabs of sleep – sometimes called first sleep and second sleep, they would read, write, pray, make love, and even socialize.

This practice may very well have occurred during this moment in human history, in this geographical region. Yet the fact that no pre-industrial cultures studied to date demonstrate a similar nightly split-shift of sleep suggests that it is not the natural, evolutionarily programmed form of human sleep. Rather, it appears to have been a cultural phenomenon that appeared and was popularized with the western European migration. Furthermore, there is no biological rhythm – of brain activity, neuro chemical activity, or metabolic activity – that would hint at a human desire to wake up for several hours in the middle of the night.

Instead, the true pattern of biphasic sleep – for which there is anthropological, biological, and genetic evidence, and which remains measurable in all human beings to date – is one consisting of a longer bout of continuous sleep at night, followed by a shorter mid afternoon nap. Accepting that this is our natural pattern of slumber; can we ever know for certain what types of health consequences have been caused by our abandonment of biphasic sleep..? Biphasic sleep is still observed in several siesta cultures throughout the world, including regions of South America and Mediterranean Europe. When I was a child in the 1980s, I went on vacation to Greece with my family. As we walked the streets of the major metropolitan Greek cities we visited, there were signs hanging in storefront windows that were very different from those I was used to back in England. They stated: open from nine a.m. to one p.m. closed from one to five p.m., open five to nine p.m.

Today, few of those signs remain in windows of shops throughout Greece. Prior to the turn of the millennium, there was increasing pressure to abandon the siesta like practice in Greece. A team of researchers from Harvard University's School of Public Health decided to quantify the health consequences of this radical change in more than

23,000 Greek adults, which contained men and women ranging in age from twenty to eighty-three years old. The researchers focused on cardiovascular outcomes, tracking the group across a six-year period as the siesta practice came to an end for many of them.

As with countless Greek tragedies, the end result was heartbreaking, but here in the most serious, literal way. None of the individuals had a history of coronary heart disease or stroke at the start of the study, indicating the absence of cardiovascular ill health. However, those that abandoned regular siestas went on to suffer a 37 percent increased risk of death from heart disease across the six year period, relative to those who maintained regular daytime naps. The effect was especially strong in workingmen, where the ensuing mortality risk of not napping increased by well over 60 percent.

Apparent from this remarkable study is this fact: when we are cleaved from the innate practice of biphasic sleep, our lives are shortened. It is perhaps unsurprising that in the small enclaves of Greece where siestas still remain intact, such as the island of Ikaria, men are nearly four times as likely to reach the age of ninety as American males. These napping communities have sometimes been described as "the places where people forget to die." From a prescription written long ago in our ancestral genetic code, the practices of natural biphasic sleep, and a healthy diet, appear to be the keys to a long – sustained life.

Compiled by **Dr. Thamizhselvi**

From the book WHY WE SLEEP

by MATTHEW WALKER

IMPORTANT DAYS IN MAY 2019

May-01	International Labour Day
May-12	International Nurses Day
May-12	Mothers' Day (Second Sunday of May)
May-25	Worlds Thyroid Day
May-31	World No Tobacco Day

Dr. E S Usha and Dr. Sangeetha as faculty at Doppler workshop in Annamalai University on 21.04.2019

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