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Tel: (03) 4042 0617, 4041 8972, 4041 1375 Fax: (03) 4041 8187
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Kaos J. 40°C threshold for 'heatwave emergency' Kuala Lumpur: The Star Malaysia; [updated 18 March 2016, cited March 2016]. Available from: <http://www.thestar.com.my/news/nation/2016/03/18/heatwave-emergency-threshold/>.

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Caesarean Scar Ectopic Pregnancy – Uncommon Complication of a Common Surgery?

Dr Kamala Swarnamani (M.S.0G)

PSG Institute of Medical Sciences and Research, Off Avanashi Road, Peelamedu, Coimbatore, Tamil Nadu, 641004, India

ABSTRACT

Objectives: To analyse the incidence, presentation, diagnosis, treatment modalities and follow up of patients with Caesarean Scar Ectopic Pregnancy (CSEP) in a tertiary care referral hospital between 2012 and 2017. **Methods:** A total of nine cases were identified by retrospective analysis of case records and operation theatre registers and patients were followed up for complications and future pregnancies. **Results:** The incidence in our study was 1:1200 which is higher when compared to studies reported in literature (1:1800-1:2200). 6 patients had a definitive diagnosis of CSEP whereas 3 of them had been treated as intrauterine pregnancies and evacuation attempted resulting in profuse haemorrhage. The gestational age at presentation ranged from 5-8 weeks and cardiac activity was detectable in 3 of the cases. The interval between the antecedent caesarean section and the CSEP varied between 1-10 years. The treatment modalities offered include systemic methotrexate, selective uterine artery embolisation, ultrasound guided evacuation, resection by laparotomy with one patient managed by hysterectomy following catastrophic bleeding. 8 of the 9 patients had more than one mode of management whereas one patient was managed by methotrexate alone. Surgery was the commonest management modality (8 cases) followed by uterine artery embolisation (4 cases). 5 patients had emergency surgery whereas 3 of them had elective resection following failed medical therapy. 2 patients underwent concurrent sterilisation during scar excision. One patient who underwent scar excision conceived 2 years later, had an uneventful pregnancy and delivered at term by elective caesarean section. All the patients had an uneventful postoperative period. **Conclusion:** With the increasing incidence and rise in awareness amongst healthcare professionals regarding the diagnostic criteria of CSEP, complications due to misdiagnosis/delayed diagnosis could be reduced significantly. There is no single best treatment option for CSEP; management has to be individualised. More studies with larger numbers might be needed to frame guidelines for uniform management.

The Efficacy of Modified Viennesse Manual Perineal Protection (VMPP) versus Conventional Technique in Perineal Protection at Second Stage of Labour: A Randomize Comparative Study

Zalina Nusee^{1,2}, Ruztini Jenal^{1,2}, Zulpadli²

¹International Islamic University Malaysia, ²Hospital Tengku Ampuan Afzan, Kuantan

ABSTRACT

Introduction: The modified Viennese manual perineal protection (VMPP) is a modified method based on an experimental study on a computerized biomechanical model of the perineum by Jansova and colleagues. It determines the exact placement of fingers on the perineum that has less perineal tension with the minimal perineal injury. **Aim:** To evaluate the effectiveness of modified VMPP in protecting the perineal injury and need of episiotomy compared to conventional method. The associated risk factors for perineal injury were also identified. **Methodology:** A randomize case control study on laboring women without previous vaginal delivery at the tertiary hospital. The modified VMPP was based on a method described by Jansova et al. (2014). The sanitary pad was used to support and protect perineum in the control group. **Result:** A total of 158 women were recruited and divided into modified VMPP group (n=71) and control group (n=78). Nine cases were excluded due to instrumental deliveries. Thirty two (21.5%) women had intact perineum mainly in modified VMPP group (p=0.022). There were 81 (54.4%) cases of first degree perineal tear, 16 (10.7%) second degree tear and 26 (18.7%) required episiotomy which is more in the control group (p=0.548). None of the participants suffered third or fourth degree perineal tears. The more advanced maternal age, the higher BMI and larger infant's head circumference, the higher the risk of perineal injury. **Conclusion:** Modified VMPP is effective in minimizing perineal injury and less need for an episiotomy. The risk of perineal injury is higher with increasing maternal age, BMI and fetal head circumference.

KEY WORDS:

Modified VMPP, Perineal tear, Episiotomy, Manual perineal protection, Second stage of labour

Tenofovir-induced Acute Kidney Injury in HIV-infected Pregnant Woman

Stella Kawilarang¹, AAG Putra Wiradnyana²

¹Department of Obstetrics and Gynecology, Faculty of Medicine Universitas Udayana, Sanglah General Hospital, Bali, Indonesia, ²Department of Obstetrics and Gynecology, Faculty of Medicine Universitas Udayana, Division of Maternal and Fetal Medicine, Sanglah General Hospital, Bali, Indonesia

ABSTRACT

Introduction: HIV-positive pregnant women need special care and management in order to prevent further transmission towards the fetus. Based on the Indonesian Ministry of Health Report in 2016, there were about 0.49% of pregnant women being HIV-positive, and it increases gradually each year. Antiretroviral treatment is required to be administered regardless to the stage of HIV, gestational age, CD4 or the viral load. However, there has been report of the side effect of Tenofovir as one of the regime that can cause deterioration of the kidney function. **Method:** Reporting a case report of a 21-years-old woman with HIV-positive and administer FDC (TDF/3TC/EFV). Kidney function test showed deterioration after 3 months consumption of daily FDC. **Result:** Patient was referred from a rural hospital, due to the active stage of labour when the pregnancy was still 34 weeks. The laboratory result showed poor kidney function and she denied any consumption of other nephrotoxic drugs or complaints regarding to her micturition. Emergency C-section was performed, and a female baby weighed 1850 gram with AS 8-9 was born. The regime of Tenofovir was replaced and the kidney function test showed improvement after one-month follow-up thereafter. **Discussion:** Antiretroviral is required to be administered for all pregnant women regardless to their HIV staging and also their CD4 and viral load level. However, each ARV has their own side effect and it needs to be adjusted for certain patient.

KEY WORDS:

HIV-positive, pregnancy, acute kidney injury, Tenofovir

Transforming Audit into an Educational Tool: A Completed Caesarean Section Urgency Audit Cycle and Introduction to 'AIM' Technique

Aizura-Syafinaz Adlan, Maherah K, I Balchin

Department of Obstetrics and Gynaecology, Faculty of Medicine, University of Malaya, Kuala Lumpur, Malaysia

ABSTRACT

Context: When there is an unplanned or emergency Caesarean Section, the indication and its urgency need to be effectively communicated amongst the team members namely the labour ward staff. The Royal College of Obstetrics & Gynaecology's National Institute of Health & Clinical Excellence (NICE) has recommended the use of grading of the urgency of Caesarean Section (NICE guideline CG 132, 2011) to minimise the differences in perception. Grading is dependent on the urgency of the Caesarean Section taking into account the danger degree towards the mother and the unborn child. **Objective:** To determine if grading of Caesarean Section is being used effectively and documented appropriately within the labour ward team. The documentation must denote the indication of Caesarean Section, grade of Caesarean Section, time of decision making, time of knife to skin and also the decision on incision interval (DII) duration. **Design, Setting, Participants:** We conducted a single-centred, prospective audit looking into the current labour ward practice. All 277 cases of emergency Caesarean Sections that took place between 1st March 2016 and 31st May 2016 were audited in the first cycle. The second cycle of the audit took place from 1st to 31st October 2016 whereby 127 cases were analysed to complete the audit cycle loop. A total numbers of 404 cases were reviewed in this audit. **Results:** A Total number of 404 cases were analysed during this audit. We were able to achieve 100% on documentation on indication of Caesarean Section, timing of decision making and timing of knife to skin, however only 43% (118 cases out of 277 cases) has documented the grade of Caesarean Section. Marked improvement to 95% (121 cases out of 127) on grading documentation was seen after awareness and training inculcated to the labour ward staff. **Conclusion:** A complete audit cycle such as this can be used to empower knowledge and can be utilised as a great educational tool. Awareness and team training using 'AIM technique' are important to improve performance of the labour ward staff in enhancing effective team work and improved documentation on grades of Caesarean Section. It can also be employed in other emergency situation for the better.

Obstetric Outcomes in Women with Polycystic Ovarian Syndrome after IVF: A Case-Controlled Study

Najah S, Ng BK, Lim PS, Omar MH

Department of Obstetrics and Gynaecology, UKM Medical Centre

ABSTRACT

Background: There is paucity in data with regards to obstetric outcomes of women with polycystic ovarian syndrome (PCOS) who had assisted reproductive technology (ART) treatment in Malaysia. **Study Objective:** To evaluate whether PCOS independently predicts pregnancy and neonatal complications when adjusted for important confounders such as maternal age and body mass index (BMI). **Materials and Methods:** This is a retrospective study that was carried out at the Medically Assisted Conception Unit, UKM Medical Centre. Women with confirmed PCOS and unexplained infertility who underwent in vitro fertilization (IVF) from January 2015 until December 2015 were recruited. A total of 182 subfertile women including 89 women with PCOS (study group) and 83 women with unexplained infertility (control group) were studied. Maternal outcomes such as preterm delivery, gestational hypertension, gestational diabetes mellitus, instrumental delivery and caesarean section as well as neonatal outcomes such as macrosomic baby, neonatal intensive care unit admission, Apgar score, neonatal hypoglycaemia and neonatal jaundice were analysed. **Results:** The number of oocytes retrieved and ova fertilized were higher in the study group compared to the control group ($p=0.004$ and $p=0.041$). There was no significant difference in IVF outcomes ($p=0.446$) but the study group had a higher number of take home babies compared to the control group (17.2% vs 10.1%, $p=0.047$). There was a significantly higher incidence of Ovarian Hyper-Stimulation Syndrome in the control group ($p=0.026$). There was no significant difference in maternal complications such as gestational diabetes mellitus and hypertension ($p=0.121$), gestational age at delivery ($p=0.493$) and mode of delivery ($p=0.441$) in both groups. There was no statistically significant difference in neonatal outcomes as well with regards to baby birth weight, Apgar score at 5 minutes, cord pH, NICU admission rates, neonatal hypoglycaemia and neonatal jaundice ($p>0.05$). **Conclusion:** The take home baby rate was significantly higher in subfertile women with PCOS compared to women with unexplained infertility. There was no significant difference in maternal and fetal outcomes between both groups.

Risk for a Fetal Chromosome Abnormality when Low Fetal Fraction Results in 'No Call' by NIPT

Trudy McKanna, Shifra Krinshpun, Allison Ryan, Peter Benn

Institution: Natera

ABSTRACT

Objectives: To assess the frequency of fetal chromosome abnormalities in women who receive a "no-call" result from non-invasive prenatal testing due to low fetal fraction (FF); and to identify the subset of women at highest risk and who would most benefit from immediate referral for ultrasound and/or diagnostic testing. **Methods:** Clinical follow-up was obtained for women who received a "no-call" due to low FF. A fetal-fraction-based risk (FFBR) model incorporating prior risk with maternal weight (MW) - and gestational age-adjusted FF to determine risk for chromosome abnormality was developed. A high FFBR score of $\geq 1/100$ indicated elevated risk for triploidy, trisomy 18 (T18), or trisomy 13 (T13). **Results:** Of 1,350 cases, 202 cases were lost to follow-up/had missing information and were excluded. Of the 1,148 cases with an outcome — 1,006 (87.6%) were confirmed/presumed normal, 48 (4.2%) had confirmed chromosomal abnormality, 9 (0.8%) had a suspected chromosomal abnormality. Eighty-five (7.4%) pregnancies ended in pregnancy loss. The FFBR algorithm assigned 564 (49%) cases a high FFBR score and 584 (51%) a low FFBR score. High-FFBR-score cases had a greater proportion of FF-related chromosomal abnormalities than women with low FFBR scores (7.1% vs. 1.4%) and more fetal deaths (14.7% vs. 2.7%). **Conclusion:** Low FF is associated with a high risk for fetal death, triploidy, T18, and T13, but not T21. The FFBR algorithm identified a high-risk subgroup of 'no-call' cases due to low FF that should be immediately referred for additional testing. Cases with a low FFBR cases may benefit from a redraw.

Placental VEGF Expression in Pregnant Secondhand Smoker

Dr Bahiyah Abdullah, Muadz Baharom, Dr Norizal Mohd Noor, Dr Nurhuda Ismail, Dr Noor Kaslina Mohd Kornain, Dr Methy Kannan Kutty

ABSTRACT

Introduction: Secondhand smoker (SHS) carries various negative implications towards pregnancy including hypoxia due to uteroplacental insufficiency. Vascular Endothelial Growth Factor (VEGF), the most important angiogenic factor that triggers vascular endothelial cell proliferation, tubule formation and increases the microvascular permeability, is known to be oxygen-dependent. While cotinine, which has been shown to be raised in SHS, reduces blood flow to the uterus and increases the carboxyhemoglobin levels in the cord blood. Therefore, it is postulated that there is overexpression of placental VEGF among SHS and this could be due to the increased cotinine level. **Objective:** To compare the placental VEGF expression between pregnant SHS and non-secondhand smoker (non-SHS) and to correlate the level of cord blood cotinine with placental VEGF expression. **Methods:** This was a cross-sectional comparative study in Hospital Sungai Buloh involving 200 non-smoking pregnant women at term, of whom 100 were SHS and 100 were non-SHS. Those with multiple pregnancies, with body mass index (BMI) of more than 30 kg/m² or who delivered by Caesarean section were excluded. The participants' basic demographic details, delivery details, fetal outcome and placental weight were recorded. Umbilical cord blood sample was analyzed for cord blood cotinine level using Cotinine ELISA kit and immunohistochemistry test for VEGF expression evaluation by three pathologists blinded to the clinical data. VEGF expression was quantified using a visual grading system based on the intensity of staining. **Results:** The placental VEGF expression in SHS group were weak positive (n=44), moderate positive (n=38) and strong positive (n=18). On the other hand for the non-SHS group, 25 were weak positive and 75 were moderate positive. This demonstrates a significant difference of VEGF expression between SHS and non-SHS group (p<0.001). Despite cord blood cotinine level is higher in SHS group (p<0.001), the strength of positive correlation between cotinine level and VEGF expression was low (r=0.345, p<0.001). **Conclusion:** There is significantly increased placental VEGF expression in SHS. Higher cord blood cotinine level may just be one of the plausible mechanisms for the up-regulation of VEGF expression.

Induction of Labour using Foley Catheter: Traction versus No Traction – A Randomized Prospective Study at Tertiary Hospital

Zalina Nusee, Siti Mariam Ismail, Mokhtar Awang, Hamizah Ismail

Department of Obstetrics and Gynecology, International Islamic University Malaysia

ABSTRACT

Cervical ripening of an unfavorable cervix can be achieved by placement of a trans-cervical catheter. The aim of this study was to assess the effectiveness of 750 ml traction on Foley's catheter compared to no traction for labour induction. **Methodology:** It is a randomized controlled trial performed on pregnant women at 37-41 week who were admitted for induction of labour with unfavorable cervix. They were randomly assigned into two groups, Foley's with 750 ml traction and without traction. The outcome measured were change in Bishop Score, mode of delivery, risk of maternal and fetal infection, pain score and successful VBAC. **Result:** Total of 160 women were randomized into traction group (n=80) and control group (n=80). The mean change in Bishop Score was similar in both groups. Traction group had significantly (p=0.006) higher number of vaginal delivery (70%) compared to control group. The rate of successful VBAC was also significantly (p= 0.001) higher in the traction group. Participants were comfortable using both methods with low pain score. There was no difference in the neonatal outcome and risk of maternal infection in both groups. **Conclusion:** Application of traction did result in more successful vaginal delivery and vaginal birth after Caesarean section.

KEY WORDS:

Cervical ripening, Foley's catheter, labour induction, previous scar, VBAC

Intravenous Remifentanil PCA versus Levo-Bupivacaine with Fentanyl PCEA in the Management of Labour Pain

Dr Harriszal bin Amiruddin, Dr Terrence Teow

Department of Anesthesiology Hospital Pulau Pinang

ABSTRACT

In 2002, a study by Vyveret al showed that labour epidurals were commonly administered as either a continuous epidural infusion analgesia (CEI) or patient-controlled epidural analgesia (PCEA). Unfortunately, not all pregnant mothers are suitable for epidural analgesia. In order to overcome this problem, opioid-based analgesics such as pethidine and fentanyl were used as an alternative to labour epidural. However, older generations of opioids showed profound side effects on the mother such as sedation, respiratory depression, nausea, vomiting and itchiness while the newborn may have respiratory depression. The use of remifentanil in obstetric started in 1998 after an initial study established its pharmacokinetic profile in pregnant patients and neonates. Pharmacokinetic and pharmacodynamic properties of remifentanil makes it a safe alternative to epidural analgesia. In view of the above, we designed our study to compare the analgesic efficacy between intravenous remifentanil patient-controlled analgesia (PCA) and levo-bupivacaine with fentanyl PCEA in managing labour pain. Both methods applied background infusion to achieve a baseline level of pain control with the option to self-administer additional doses of analgesics to control pain. We used a simplified remifentanil PCA regimen with the aim to minimize unwanted maternal and neonatal side effects and at the same time, avoid tedious calculations that may give rise to error and thus, cause more harm. A total of 45 participants were recruited and randomly distributed to either the remifentanil group who received 20 µg boluses of remifentanil with 2 minutes lock-out time and 80-120 µg/hour remifentanil background infusion or the PCEA group who received 10 ml boluses of 0.05% levo-bupivacaine and fentanyl 2 µg/ml with 30 minutes lock-out time and 10 ml 0.05% levo-bupivacaine and fentanyl 2 µg/ml background infusion. The verbal reporting scale was used to measure pain score at 15 minutes intervals. Other outcomes assessed included maternal side effects and neonatal well-being. There were no statistical differences in pain scores between both groups during the first 45 minutes. However, from 60 to 120 minutes into the trial, the PCEA group had significantly lower pain scores than the remifentanil group but despite this difference, all participants were satisfied with pain control. Apart from significantly higher sedation scores in the remifentanil group, there were no significant differences in other maternal side effects and neonatal outcome. In conclusion, intravenous remifentanil PCA is a good alternative to PCEA in managing labour pain and it is safe for both the mother and newborn.

Acceptability of Low Molecular Weight Heparin Thromboprophylaxis amongst Muslim Mothers in Sarawak

Hian Yan Voon¹, Ming Cheng Chai², Ling Yien Hii³, Rafaie Amin⁴, Haris Njoo Suharjono⁴

¹Departments of Obstetrics and Gynaecology, Sri Aman Hospital, ²Sarikei Hospital, ³Kapit Hospital, ⁴Sarawak General Hospital

ABSTRACT

Objective: 39 mothers succumbed to thromboembolism during the 2006-8 triennium in Malaysia, with similarly alarming trends observed in Asia-Pacific and Western countries alike. The significance of this condition is magnified in part, by the reduction in 'traditional' causes of maternal deaths such as haemorrhage and hypertensive disorders in pregnancy. A state-wide, documented, serial risk assessment programme has been in place since 2013, whereby women at risk were offered low molecular weight heparin (LMWH) as the first line pharmacological thromboprophylaxis. The benefits and safety of LMWH over unfractionated heparin and pentasaccharide has been adequately chronicled elsewhere. However, the manufacturing of LMWH involves cleavage of heparin derived from porcine intestinal mucosa, which may be of a concern to a section of the population. We examined the acceptability of LMWH amongst Muslim patients in the state. **Methods:** A retrospective review of 2,500 consecutive deliveries across three minor specialist district hospitals in Sarawak was performed. This was part of a larger study looking into the indications and uptake of obstetric thromboprophylaxis. Eligible patients were identified from the respective registries in Hospital Sri Aman, Hospital Sarikei and Hospital Kapit. These were then counter-checked with the electronic discharge notification and Informatik Kesihatan Sarawak (Sarawak Health Informatics) to ensure additional cases were not undetected. Confirmation of the patient's professed faith was based on the information contained in the registry or database above. In cases of ambiguity, case notes were traced for confirmation. **Results:** A total of 770 women who fulfilled the threshold criteria for thromboprophylaxis, of whom 164 (21.3%) were of Islamic faith. Of the 164 women, 115 (70.1%) opted for LMWH and 47 (28.6%) preferred unfractionated heparin. Two patients declined any form of thromboprophylaxis, one citing neonatal concerns while another opted for just mechanical thromboprophylaxis. Approximately half of the patients in our rural population opted for injections in their local clinic rather than self-administration. **Conclusion:** With appropriate and comprehensive counselling, the majority of Muslim mothers opted for LMWH. This would reduce the burden of repeated platelet monitoring for heparin-induced thrombocytopenia associated with unfractionated heparin. The information obtained from this study allowed better estimation of LMWH use in individual units and ensured a continuous chain of supply from resource-limited district pharmacies. Our findings however, cannot be generalized to the rest of the country, as religious edicts are under the purview of respective states and may influence the women or her partner's perception.

Toxic Epidermal Necrolysis in the First Trimester of Pregnancy

Yiap Loong Tan, MRCOG¹, Jun Jiet Ng, MD², Hian Yan Voon, MRCOG³

¹Department of Obstetrics and Gynaecology, KPJ Kuching Specialist Hospital, Kuching, Sarawak, Malaysia, ²Department of Obstetrics and Gynaecology, Hospital Sultanah Nur Zahirah, Kuala Terengganu, Malaysia, ³Department of Obstetrics and Gynaecology, Sarawak General Hospital, Kuching, Sarawak, Malaysia

ABSTRACT

Objective: Toxic epidermal necrolysis is a rare condition, occurring in approximately 1 in a million cases per year and usually reported in association with the use of medications such as allopurinol, anti-retroviral, anti-epileptics or viral infections. The incidence is even less common in pregnancy, especially in the first trimester. Toxic epidermal necrolysis (TEN) and Stevens-Johnson Syndrome (SJS) are life-threatening manifestations of a single disease entity. Although mortality is reportedly lower than non-pregnant cohorts, significant maternal and fetal morbidity is not uncommon and should be taken into consideration when counselling on disease prognosis. We illustrate our experience managing such a patient in early pregnancy. **Case Report:** A 29-year-old multiparous lady of ethnic Malay descent, six weeks into her pregnancy presented with a three-day history of fever, generalized maculopapular rashes, mouth ulcers and bilateral conjunctivitis. She was initially treated as measles but her condition deteriorated over the course of the next few days with eruptions of bullous lesions affecting about 50% of total body surface area (TBSA) and a SCORTEN 2. There was also vaginal spotting and Nikolsky sign was positive. We described in detail, challenging aspects of her management accompanied by classical images which aided the diagnosis. **Conclusion:** Changes in T-cell mediated immunity in pregnancy may alter the clinical picture and the developing fetus, especially at an early gestation, presents an additional conundrum. To the authors' knowledge, there were no other documented cases in a patient of Asian ancestry at such an early gestation. Drug-induced SJS and TEN were reportedly two to three fold higher amongst certain Asian Han Chinese compared to Caucasians, due to the association with HLA-B*15:02. A small multi-ethnic study in Malaysia has previously found similarly high inheritance of this human leukocyte antigen in the Malay population when compared to race matched, healthy controls. Management comprised mainly of supportive care but the use of corticosteroids, intravenous immunoglobulin, ciclosporin and anti-tumour necrosis factor (TNF) have been documented. TEN/SJS may result in miscarriage, preterm labour and fetal growth restriction. Long term gynaecological sequelae such as vaginal adenosis, stenosis, infertility and even endometriosis have been described. Serial fetal growth scans are imperative and mode of delivery should be discussed if vaginal stenosis is present.

A Retrospective Analysis of the Impact of O&G Specialist Delivered Service in Sarawak Largest District

Ling Yien Hii¹, Linda Ting¹, King Chin Hii², Haris Njoo Suharjo³

¹Departments of Obstetrics and Gynaecology, Kapit Hospital and ³Sarawak General Hospital, ²Director, Kapit Hospital

ABSTRACT

Objective: Kapit is the largest division of Sarawak which occupies one third total area of Sarawak (38,934 sq. km) and surrounded by dense primary forest and mountainous region. Kapit Hospital is the only category B district hospital that provides health care service for whole of Kapit population. The main objective of this retrospective study is to demonstrate the impact of O&G specialist on O&G service in Kapit Hospital. **Method:** A retrospective data collection was performed to study workload of O&G service in Kapit Hospital from 2008 to 2016. Source of data collection was retrieved from discipline manual registry from O&G ward and operation theatre. These were then counter checked with the electronic registry Sistem Maklumat Rekod Pesakit (Patient Record Information System). Annual statistics of total hospital admission to O&G ward, total obstetrics delivery, total case referral to nearest hospital with O&G specialist and total O&G procedures were analyzed. This information was subdivided into two groups namely year of study with and without presence of in-house O&G specialist in Kapit Hospital for comparison. **Results:** Total of 13,035 cases were admitted to O&G discipline during study period 2008 – 2016 (annual mean 1,448.3, SD 189.91). Total O&G case referrals were 735 (annual mean 81.7, SD 33.76). There were accumulated 7,864 obstetrics deliveries, in which 798 cases were delivered via caesarean section (caesarean rate 10%). Surgical procedures under O&G discipline was 1,489 cases, which was 832 and 657 cases for obstetrics and gynaecology respectively. The commonest obstetrics surgery performed in Kapit was caesarean section (annual mean 88.7, SD 53.56), and open permanent sterilization (annual mean 41.1, SD 15.05) for gynaecological procedure. There were 46 cases of ruptured ectopic presented to Kapit hospital between 9 years that required emergency exploratory laparotomy for damage control. On comparison between years with O&G specialist service and years with medical officers only service, there were significant increase inpatient O&G case referral during absence of in-house specialist (p=0.015), more caesarean deliveries (p=0.019), more obstetrics procedures (p=0.04) and more gynaecological procedures (p=0.038) in both elective and emergency situations. Indication for O&G cases referral (as outpatient or inpatient) during year 2016 with O&G specialist placement in Kapit in 2016 mainly due to specialist not physically available in Kapit (48.8%), followed by lack of O&G subspecialty service (15.9%), absence of other multidisciplinary such as anaesthetist or surgeon (14.6%), inadequate O&G service such as minimal invasive procedure instrument (12.2%) and patient's preference (8.5%). All O&G cases referred as inpatient required escort by medical staffs. **Conclusion:** O&G specialist service carries an utmost important duty in this remote hospital with unresolved issue related to time limited transportation for transfer. Presence of O&G specialist service in Kapit Hospital confers significant impact to the workload in O&G discipline.

Vein of Galen Malformation in a Foetus with Hydrocephalus and Cardiac Failure

Lee Na Tan, MRCOG, Japaraj Robert Peter, MMed (O&G)

Department of Obstetrics and Gynaecology, Hospital Raja Pemaissuri Bainun, Ipoh, Perak, Malaysia

ABSTRACT

Introduction: Vein of Galen aneurysmal malformation (VGAM) is a rare and complex arteriovenous malformation of the brain, which is associated with poor prognosis. It is characterised by shunting of one or more arterial blood flow into an enlarged vein of Galen located under the cerebral hemispheres. In this case report, we aim to increase awareness on this rare but serious condition. **Case Report:** A 31-year-old healthy multipara was referred to our Foetal Medicine Unit for foetal hydrocephalus noted during a routine ultrasound scan at 28 weeks of pregnancy. Antenatally her pregnancy was uncomplicated, and she was booked at 7 weeks. Her pregnancy was dated by ultrasound scan at 12 weeks. Our scan revealed increased biparietal diameter (BPD) and head circumference (HC), at 88 mm (corresponded to 35 weeks) and 293 mm (corresponded to 32 weeks), respectively. There was severe bilateral ventriculomegaly with a well circumscribed round mass located centrally at the base of the brain posteriorly. Colour doppler showed markedly increased vascularity of the mass with feeding vessels. A diagnosis of Vein of Galen Aneurysmal Malformation was made. Cardiac scan showed increased cardio-thoracic ratio with mild tricuspid regurgitation, which indicates high output cardiac failure. There was reversed end diastolic flow (EDF) on the umbilical artery (UA) doppler, with a normal ductus venosus (DV) doppler. No other abnormalities were detected sonographically. After a multi-disciplinary discussion involving the Consultant Neurosurgeon, the couple was counselled regarding the poor prognosis for the foetus. The couple opted for conservative management. She went into labour at 30 weeks and delivered a 1.4 kg baby with increased head circumference, who died 2 hours after birth. **Discussion:** VGAM may cause hydrocephalus due to its location and mass effect, as well as bleeding and high output cardiac failure secondary to shunting of blood. Successful embolisation using interventional radiology have been reported internationally with promising results in selected cases. However, VGAM presenting during the neonatal period have been shown to have worse prognosis than those presenting later in childhood. **Conclusion:** In this case, we concluded that the prognosis for this foetus was poor due to severe hydrocephalus with high risk of long term adverse neuro-developmental outcome of the VGAM. In addition, there was evidence of foetal compromise as seen by the reversed EDF of the UA doppler and high output cardiac failure at extreme prematurity.

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A Single Blinded, Open-labelled, Randomized Control Trial comparing Acetaminophen Suppository with Diclofenac Suppository as Analgesia for Perineal Injury following Childbirth

Woon Shu Yuan¹, J Ravichandran¹, Noor Azmi Mat Adenan²

¹Obstetrics & Gynaecology Department, Hospital Sultanah Aminah Johor Bahru, Malaysia, ²Obstetrics & Gynaecology Department, University of Malaya, Malaysia

ABSTRACT

Objectives: To assess the efficacy of Acetaminophen rectal suppository compared to suppository Diclofenac in women with postpartum perineal pain secondary to perineal trauma. **Methods:** This study is carried out in 2 phases. In phase I, 250 patients were recruited and managed as standard hospital protocol where no analgesia will be provided during immediate post-perineal repair. In phase II, 700 pregnant women who fulfilled inclusion criteria were randomized into suppository acetaminophen 500 mg (Group A) or suppository diclofenac 50 mg (Group B). The suppository will be given immediately post-perineal repair. Data included social demographic, antenatal history, intrapartum details, perineal trauma details will be recorded. Pain scores (resting and dynamic) will be recorded before repair (baseline), immediate post-repair, 2nd-3rd hour post-repair, 5th-6th hour post-repair and upon discharge. Severity of pain was recorded on the basis of 11-point Visual Analogue Scale (0-10). **Results:** All 3 groups showed no statistically significant difference in descriptive data including social demographic, antenatal characteristics, intra-partum details, baby's birth-weight, types of perineal tears. When compare the mean pain score of treatment group with the control group, both acetaminophen and diclofenac group significantly reduced the mean pain score (resting and dynamic) during 2nd-3rd hour & 5th-6th hour post-perineal repair following childbirth. In phase II, Pain scores (PS) were similar in both treatment groups with no statistical difference. Baseline resting and dynamic PS for group A was 6.28 \pm 1.30, 7.84 \pm 1.09, and group B was 6.30 \pm 1.29, 7.78 \pm 1.10 respectively (p=0.84 for resting PS, p=0.47 for dynamic PS). For resting and dynamic PS at 2nd to 3rd hour post-repair was 1.4 \pm 0.66, 1.94 \pm 0.71 for group A and 1.32 \pm 0.71, 1.88 \pm 0.65 for group B (p=0.123 for resting PS, p=0.243 for dynamic PS). At 5th to 6th hour post-repair, the resting and dynamic PS was 0.73 \pm 0.50, 1.30 \pm 0.58 respectively for group A and 0.71 \pm 0.53, 1.36 \pm 0.56 respectively for group B (p=0.769 for resting PS, p=0.162 for dynamic PS). **Conclusion:** Suppository acetaminophen showed comparable analgesia effectiveness in postpartum perineal pain-control following perineal repair when compared to suppository diclofenac. Since oral and intravenous analgesia always have an important issue associated with potential passage into breast milk, rectal route of analgesic administration may be a better option. Rectal route also results in faster pain relief and more effective upon local action. This study showed that suppository acetaminophen is a good option to consider in managing pain-control for post-partum post perineal repair.

Evan's Syndrome in Pregnancy: A Case Report

Farah Gan, Sulochanadevi Thanapalan, Lucas TW Luk

Department of Obstetrics and Gynaecology, Bintulu Hospital, Sarawak

ABSTRACT

Introduction: Evan's Syndrome is a rare autoimmune haematological disorder, defined by the coexistence of immune thrombocytopenia (ITP) and autoimmune hemolytic anaemia (AIHA), in the absence of a known underlying etiology. **Methods:** We describe a case of a 36 year old Iban female, Mdm L, G4P1+2A, who was diagnosed with Evan's Syndrome in 2010 and referred to our antenatal specialist clinic at 19 weeks gestation. She was managed by both obstetrics and medical teams throughout her pregnancy, and had her steroid therapy continued. She developed pre-eclampsia at 36 weeks and required C-section at 37 weeks, which was complicated by primary postpartum haemorrhage. Her baby was born well with a good weight, and normal hemoglobin and platelet count. **Discussion:** Evan's Syndrome in pregnancy has been reported to result in complications not only to the pregnant woman, but also to the developing fetus, due to transplacental passage of autoantibodies. ITP may provoke maternal hemorrhagic complications such as placental abruption and postpartum hemorrhage. In the fetus/newborn, severe thrombocytopenia has been reported, resulting in fetal hemorrhagic complications such as intracranial hemorrhage. The component of AIHA may pose a risk of life-threatening anaemia in patients, while causing fetal complications such as growth restriction, massive hemolysis leading to stillbirth, and severe postpartum hemolytic anaemia. Regular fetal monitoring should be performed with emphasis on predicting features of fetal anaemia (MCA peak velocity, IUGR). Treatment options during pregnancy are limited due to concerns regarding the teratogenic effects of drugs commonly used in the management of Evan's syndrome. Steroid therapy and azathioprine have proven to be effective and safe in pregnancy. Intravenous gamma immunoglobulin and splenectomy can be considered in refractory cases. **Conclusion:** We hope to raise the awareness of this very rare medical condition in pregnancy, by highlighting the possible complications that may arise and illustrate the importance of a multidisciplinary team approach in its management during pregnancy. Early and close surveillance, under a consultant led unit, is essential in maximizing the chances of a favorable outcome in both the pregnant woman and her developing fetus.

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Towards Elimination of Maternal to Child Transmission (EMTCT) of HIV in Malaysia: A Retrospective Review of Pregnancy Outcomes among HIV Positive Antenatal Mothers from 2009-2014 in Kelantan

Suhaidin Che Ngah¹, Nabila Ismail¹, Hazura Mat Zubir², Noor Azma Mohd Zain³, Haniah Mohd Zain³

¹Hospital Kuala Krai, ²Pejabat Kesihatan Daerah Kuala Krai, ³HIV Unit, Jabatan Kesihatan Negeri Kelantan

ABSTRACT

Introduction: Elimination of HIV transmission from mother to child (EMTCT) reduces infant mortality and is a first line of defence against the spread of the epidemic. EMTCT is a global priority and a part of the MDG 5 to reduce new HIV cases by 30%. This aim is reaffirmed by Sustainable Development Goals. Achieving EMTCT status means that Malaysia is providing an equal and quality health care for all. EMTCT was defined as ≤ 50 infant HIV infections per 100,000 live births. **Objectives:** To illustrate the prevalence, pregnancy outcomes of HIV positive antenatal mothers and to determine the EMTCT rate. **Methodology:** A retrospective study was conducted among HIV positive antenatal mothers from 2009 until 2014 in Kelantan. **Results:** A total of 148,223 deliveries were recorded from 2009 to 2014. 181 antenatal mothers were infected with HIV. The mean age of the mothers was 28.5 ± 6.0 years. The total live birth by HIV positive mothers was 174. Two babies had HIV positive in the year of 2011 and 2012 after the completion of mandatory follow up of 18 months. Thus the vertical transmission rate was 2.7% (EMTCT rate of 4.1/100,000 live births) and 3.4% (EMTCT rate of 4.2/100,000 live births) in the year of 2011 and 2012 respectively. Majority of the patients were Malay (95.6%), (96.1%) of them were married. 3.3% were single parent. 97.8% HIV transmission were by heterosexual relationship and 2.2% were transmitted by intravenous drug users. Only 2 cases delivered without any antenatal booking in the year of 2014. 42.0% were known cases of HIV infected patients prior to pregnancy while 58.0% were the new cases diagnosed during antenatal booking. 55.7% were delivered vaginally, 43.7% delivered by Caesarean Section and 0.6% delivered by assisted breech delivery. Prevention of Maternal to Child Transmission of HIV (PMCT) was initiated in all antenatal mothers comprising of the use of anti-retroviral therapy, Caesarean delivery for those with detectable virus load, not breastfeeding and mandatory infant HIV testing. **Conclusions:** PMCT was implemented in all HIV positive antenatal mothers. EMTCT was successful during the study period as demonstrated by very low vertical transmission rate. It indicates the high and equal quality of the maternal child healthcare services offered to HIV infected mothers.

KEY WORDS:

PMCT, EMTCT, HIV mothers, Vertical transmission rate

A Three-Year Review of Emergency Peripartum Hysterectomy at Hospital Sultan Ismail

Lee Chui Ling, Kong Lye Fen, Badrul Zaman Bin Muda @ Abdullah, Ghazali Bin Ismail

Department of Obstetrics and Gynaecology, Hospital Sultan Ismail, Johor Bahru

ABSTRACT

Introduction: Postpartum hemorrhage is the leading cause of maternal mortality. Emergency peripartum hysterectomy (EPH) is a challenging life saving treatment modality in such circumstances. The incidence of EPH is 1 per 1,000 deliveries (range 0.2-10.1). Meta-analysis suggested that emergency hysterectomy rates have been increasing by about 8% per year worldwide. However, there is a lack of Malaysia data on EPH. **Objective:** To study the incidence, risk factor, indications, outcomes and complication of EPH in a tertiary hospital setting. **Methodology:** Retrospective study carried out in the Department of Obstetrics and Gynaecology in Hospital Sultan Ismail (HIS) from January 2014 to December 2016. **Results:** During the study period, total of 36,559 deliveries of which 30,453 vaginal deliveries and 6,106 were CS. There were 25 cases with overall incidence at the rate of 0.68 per 1,000 births. The rate of EPH was 3.76/1,000 CS deliveries and 0.06/1,000 vaginal deliveries. The mean maternal age was 34 years (25.0, 42.0) and parity 3 (2.0, 6.0) and 64% Malay, 24% Chinese, 8% Indians and 1 % others. The most common indication for EPH was morbid adherent placenta 20 cases (80%), uterine atony 3 cases (12%) and cervical cancer 2 cases (8%). Placenta previa was a significant risk factor. The most cases contribute to EPH was delivery via emergency CS (64%), elective CS (28%) and spontaneous vaginal delivery (2%). The mean gestational age of delivery was 34 weeks with a birth weight of 2,359 grams with a mean Apgar of 7 in 1 minutes 76% of newborn admitted for intensive care with one case of neonatal death. Measures used to treat postpartum hemorrhage included oxytocin infusion in all cases, prostaglandin usage in 24% of cases, tranexemic acid (32%), Bakri balloon (4%), internal iliac ligation (32%) and B lynch (12%). Total abdominal hysterectomy was performed in 21 cases (84%) while subtotal hysterectomy in 2 cases (8%). Wertheim hysterectomy was performed in 2 cases (8%) with concurrent cervical cancer. Mean operative times was a 177 minutes with a mean of blood loss of 5,412 mls. (500, 17000). Major maternal morbidity of EPH included massive blood transfusion with mean 5.8 pint of pack cell, DIVC (64%), wound infection (4%), fever (4%), paralytic ileus (16%), postoperative anemia (52%), ventilator support (60%), bladder injury (12%), bowel injury (4%) and fistula (4%). There is one maternal death (4%). The mean length of hospital stay was around 6.4 days. **Conclusion:** Majority of women who underwent EPH had a favourable outcome after exhausting all other options for postpartum haemorrhage. Further audits are required to maintain the standard of care and to improve services.

Expression and Methylation Status of Genes related to Plasminogen Activator System in Primigravida with Major Placenta Praevia

Wan Syahirah¹, Nur Azurah Abd Ghani¹, Reena Rahayu³, Muhiddin bin Ishak², Lim Pei Shan¹, Nirmala Kampan¹, Mohamed Nasir Shafiee¹, Mohd Hashim Omar¹, Norfilza Mohd Mokhtar²

¹Department of Obstetrics and Gynaecology, Faculty of Medicine, Universiti Kebangsaan Malaysia Medical Centre, ²UKM Medical Molecular Biology Institute, Universiti Kebangsaan Malaysia, ³Department of Pathology, Faculty of Medicine, Universiti Kebangsaan Malaysia, Jalan Yaacob Latif, Cheras, Malaysia

ABSTRACT

Introduction: Epigenetic study among primigravida with major placenta praevia is needed for a better understanding of the disease as well as to reduce both maternal and fetal morbidity and mortality. The aim of the study was to investigate the methylation status of the urokinase plasminogen activator (UPA) and tissue plasminogen activator (TPA) promoter in the placental tissue of primigravida with major placenta praevia compared to non-placenta praevia. We also determine the expression of the transcript level of plasminogen activator tissue (PLAT), serpin peptidase inhibitor (SERPINE), and proline-rich acidic protein (PRAP) gene in the same cohort of primigravida with major placenta praevia compared to non-placenta praevia (controls). **Methods:** A cross-sectional comparative study was performed among 24 primigravida in two groups (major placenta praevia vs non-placenta praevia) from January 2013 to January 2014 in a teaching university hospital in Kuala Lumpur. Following the research ethics approval, the recruitment was performed in the maternity unit prior to the elective caesarean delivery. Clinical assessment was carried out before sampling of the placental tissue during caesarean section. Taqman polymerase-chain reaction and methylation study were done on the gene of interest. T-student test was used to compare between the two groups, with P value <0.05 considered statistically significant. **Results:** A total of 24 primigravida (12 participants in respective group) were recruited. Majority of them were Malays (83.3%), and the mean age was 29.38 (+2.81). Most cases were posterior placenta praevia (83.3%) with half of the participants had type 2 praevia (58.3%). PLAT and SERPINE expressions were increased, but not statistically significant in the placental tissue of major placenta praevia compared to non-placenta praevia (controls) (p=0.47 and 0.99). PRAP expression was similar for placenta praevia and non-placenta praevia (p=0.99). TPA and UPA were significantly hypermethylated in placenta praevia compared to controls with p<0.001 respectively. **Conclusions:** TPA and UPA were hypermethylated in placental tissue of primigravida with major placenta praevia compared to non-placenta praevia.

KEY WORDS:

Methylation, plasminogen activator system, placenta praevia, primigravida

OASIS: A 3-year Retrospective Review in Ampang Hospital

Wong WH, Rathimalar K, Muralitharan G

Department of Obstetrics and Gynaecology, Ampang Hospital

ABSTRACT

Objective: This study is aimed at establishing local data on the incidence of obstetric anal sphincter injuries (OASIS) (third and fourth-degree perineal tears), risk factors of OASIS and to compare the results with international data. **Methodology:** It is a retrospective review and analysis of women with OASIS in the Department of Obstetrics and Gynaecology, Ampang Hospital (AH) from 2014 – 2016. The cases were identified through maternity records. The international data on OASIS was obtained through web-database search. The data was collected and statistically analysed using SPSS. **Results:** We reviewed 29,289 deliveries, over the 3-year-period. There were 42 cases of OASIS, giving an incidence of 0.16%, which was very low as compared to international data, which ranged from 0.6-4.2% ($p < 0.001$). Greater birth weight and instrumental delivery are recognized risk factors of OASIS. However, the protective effect of episiotomy is conflicting. We studied these risk factors in AH and compared them with international data. We found that the mean birth weight in AH was lower, at 3.101 kg, as compared to 3.389 kg and 3.352 kg in the UK and USA respectively. The rate of instrumental delivery in AH was low, at 3%, as compared to 10-13% and up to 23% in the UK and USA respectively ($p < 0.001$). There was also an exceptionally high rate of episiotomy in AH, at 63.16%, as compared to 15% and 11.6% in the UK and USA respectively ($p < 0.001$). **Conclusion:** The low incidence of OASIS in AH could be associated with lower mean birth weight, lower rate of instrumental delivery and higher rate of episiotomy.

Angle of Episiotomy Practices among Medical Personnel: HKL Experience (Preliminary Report)

Irwati, P, Ng PY, Nasrulliza AM, Rohani K, Farina S, Noraihan AM

O&G Department, Hospital Kuala Lumpur, Malaysia

ABSTRACT

Introduction: OASIS incidence had been increasing over the years. Multiple risks factors had been identified. Among them Asian ethnicity, nulliparity, birth weight of more than 4 kg, occipito-posterior position, instrumental deliveries and angle of episiotomy. A post episiotomy angle of more than 45 degree is associated with decreased anal sphincter injuries. **Objective:** To assess the post episiotomy angle among medical personnel. **Methodology:** This is a retrospective study done from 1st May 2016 till 21st May 2016. All patients who had episiotomy were recruited into this study. Demographics data, accoucher's details (i.e. type of medical personnel and experience) and post episiotomy angle were collected. **Results:** A total of 119 patients were recruited. Only 5 patients (4.2%) had angle of 15 degree and below and 26 patients (21.8%) had post episiotomy angle of 30 degree. Therefore 88 patients (73.9%) had a post episiotomy angle of 45 degree and more. **Conclusion:** Episiotomy was properly done by the medical personnel.

A Case of Euglycemic Diabetic Ketoacidosis in Pregnancy

Ng Keat Sim, Ng Beng Kwang, Rahana Abd. Rahman, Ani Amelia, Zaleha Abdullah Mahdy

Department of Obstetric and Gynaecology, University Kebangsaan Malaysia Medical Centre, Kuala Lumpur, Malaysia

ABSTRACT

Introduction: Diabetic ketoacidosis (DKA) in pregnancy could be a disastrous event, which increased both maternal and perinatal morbidity and mortality. As opposed to the typical findings of hyperglycemia, DKA can occur with a relatively low, or even normal blood glucose level, which is called euglycemic DKA. It particularly affects pregnant woman with pre-existing diabetes mellitus and poor oral intake. **Methodology:** We report a case of euglycemic DKA in a pregnant woman with gestational diabetes mellitus on insulin. **Results:** A 34 years old woman at 35 weeks of gestation, with underlying gestational diabetes mellitus, presented with 4 days history of vomiting and poor oral intake. She omitted insulin injection for 3 days duration. Apart from moderately dehydrated and tachycardic (pulse rate 136 beats/min), her systemic examination was unremarkable. Blood glucose level was 9.4 mmol/L with ketonuria of 2+. Venous blood gas revealed pH 7.19, bicarbonate 10.4 mmo/L and anion gap of 9.6 mmo/L. She was admitted to ICU after a late revised diagnosis of euglycemic DKA made by the endocrine team. An emergency caesarean section was performed for fetal distress on the same day. There was improvement in the metabolic acidosis with intravenous fluid and insulin infusion. Both the patient and her baby were discharged well after 5 days. Six weeks later, she was diagnosed to have type 2 diabetes mellitus following an abnormal modified glucose tolerance test. **Conclusion:** This case illustrates the diagnostic challenge of DKA when euglycemia was encountered. This rare condition necessitates high index of suspicion by clinician with early recognition and prompt treatment, in order to prevent further maternal and fetal adverse outcomes.

KEY WORDS:

Euglycemic diabetic ketoacidosis, gestational diabetes mellitus

Congenital Anomaly Band causing Bowel Ischaemia Post Caesarean Section

Phon Su Ee, Ng Beng Kwang, Anizah Ali, Rahana Abdul Rahman, Ani Amelia Zainuddin, Zaleha Abdullah Mahdy

Obstetric and Gynaecology Department, Hospital University Kebangsaan Malaysia

ABSTRACT

Introduction: Congenital anomaly band is an extremely rare condition, but may induce small bowel obstruction (SBO) at any age, predominantly in childhood and rarely in adults. **Methodology:** We report a case of extensive bowel ischaemia following caesarean section, due to trapping of an intestinal loop between a congenital anomaly band and the mesentery. **Results:** A 42-year-old, Gravida 2 Para 1, who has no history of prior abdominal surgery or trauma, presented in spontaneous labour and underwent an uncomplicated emergency lower segment caesarean section, for fetal distress. Postoperatively, she had worsening abdominal distension and pain, followed by vomiting. Computed Tomography Scan of the abdomen showed gross fluid retention with marked small bowel dilatation and fluid filled bowel loops. An emergency exploratory laparotomy was performed which revealed a congenital band, extending between the right fimbrial end and the small bowel mesentery, looping over the small bowel, causing extensive small bowel ischemia. Post-operative course was uneventful. **Conclusion:** Congenital anomalous band resulting in small bowel obstruction is a rare entity that should be considered in the differential in patients with clinical features of bowel obstruction, and no prior history of abdominal surgery or trauma. Surgical treatment should be prompt to prevent ischaemia and reduce morbidity and mortality.

KEY WORDS:

Bowel ischaemia, congenital band, bowel obstruction

A Case Report: Fatal Outcome of Cerebral Venous Sinus Thrombosis with Cerebral Haemorrhage in Early Pregnancy

Kavitha Muraj Rajamany, Nurezwana Elias, Noor Azmi Mat Adenan

Department of Obstetrics and Gynaecology, Faculty of Medicine, University of Malaya, 50603 Kuala Lumpur, Malaysia

ABSTRACT

Introduction: Cerebral venous thrombosis with cerebral haemorrhage is relatively rare yet can result to fatal outcome. Antithrombin III deficiency is one of the inheritable coagulable states that contribute to an increase in thromboembolic event during pregnancy. **Objective:** To evaluate the risk of pregnancy-associated venous thromboembolism in women with antithrombin III deficiency. **Case Report:** This is a case of 34 years old, pseudo-primigravida at 9 weeks of gestation, with underlying antithrombin III deficiency and currently on treatment dose of low molecular weight heparin, presented with sudden episode of frontal headache associated with projectile vomiting side. A plain CT and MRA/MRV brain showed features suggestive of CVST involving superior sagittal sinus with venous infarct and right frontal and left parietal intraparenchymal haemorrhage. Subsequently, patient had fitting episodes and loss of consciousness and further assessment noted unequal pupils. A repeated CT brain showed worsening intraparenchyma haemorrhages with midline shift, subfalcine herniation and cerebral oedema. Therefore, an emergency bifrontal craniectomy was performed to relieve the intracranial pressure. Despite the operation and supportive measures, patient succumbed to death due to rising intracranial pressure. **Conclusion:** Due to highly thrombophilic state of pregnancy with concomitant antithrombin III deficiency, administration of antithrombin III concentrate, in addition to anticoagulation, should be considered during pregnancy and puerperium to women with documented antithrombin deficiency.

Pregnancy following Manchester Repair – A Case Report

Ng PY, Tan C, Wong YS, Noraihan MN

Urogynaecology Unit, O&G Dept, Hospital Kuala Lumpur

ABSTRACT

Introduction: Pelvic organ prolapse among young fertile patient is increasing. Management of these patients remained a challenge to medical personnel. Fertility is an important issue. Conservative management using ring pessary is advocated. However, when ring fails; surgery conserving the uterus i.e. sacrohysteropexy and Manchester repair are recommended. Manchester repair is associated with preterm labour. **Case Presentation:** This is a case report of a 29-year-old lady who sustained pelvic organ prolapse following motor vehicle accident. She was treated with ring pessary. She conceived her 1st pregnancy in 2015 and delivered via Caesarean section at 31 weeks period of amenorrhoea. She underwent Manchester repair and Pelvic Floor Repair on 25th Mac 2016. She conceived in May 2016. She delivered at 31 weeks via Caesarean Section for preterm labour. Her baby weighed 1.3 kg and discharged well. **Conclusion:** Manchester repair does not affect fertility. As expected, patient had pre-term delivery. In young women with pelvic organ prolapse who wants fertility, Manchester repair is an option.

Symptomatic Tarlov Cyst in Postpartum – A Rare Presentation

Woon Shu Yuan, Noor Azmi Mat Adenan

Obstetrics and Gynaecology Department, University Malaysia Medical Center

ABSTRACT

Introduction: Tarlov cysts are dilation of the nerve root sheaths and are abnormal sacs filled with cerebrospinal fluid that can cause a progressively painful radiculopathy which located most prevalently at S2-3 level of the sacrum. Childbirth and epidural anaesthesia are possible condition that might potentially cause the asymptomatic cysts to become symptomatic. **Case Summary:** We present a case of sacral Tarlov cyst diagnosed during post-partum period. Mdm. SNM is a 31-year-old pseudo primigravida, whom was admitted in March 2017 at 36 weeks period of gestation (POG) for induction of labour in view of history of preterm prelabour rupture of membrane at 32 weeks POG. She was also class II maternal obesity with gestational diabetes mellitus on diet control antenatally. She had only one 3 mg dinoprostone tablet inserted vaginally and artificial rupture of membrane was performed about 6 hours later in view of favourable cervix. During this time, she had epidural anaesthesia inserted at L4/5 level with continuous infusion of ropivacaine. However, she failed to progress further despite having achieved optimal uterine contraction with intravenous oxytocin augmentation. She then underwent an emergency caesarean section for failed induction after 10 hours in labour. The surgery was uncomplicated with estimated blood loss of 400 cc. She was discharged well on day 2 post-operatively. However, patient presented to us 4 weeks postpartum with lateral thigh and intermittent tingling sensation which persisted since post-delivery. She also complained of lower backache and intermittent numbness and tingling sensation over the lower abdomen region. Otherwise, she was able to ambulate and encountered no issue in micturition or bowel motion. Further neurological examination revealed no other neurological deficit. Muscle power of both lower limb were full but reduced sensation over lateral thigh. Transabdominal Ultrasonography excluded the presence of pelvic abscess, pelvic masses or haematoma at pelvic region. MRI lumbar spine revealed a well-defined high signal intensity oval lesion at S2 region measuring 1.4x2.2x3.1 cm in keeping with Tarlov's cyst and no evidence of nerve root impingement or spinal stenosis. She was currently planned for conservative management by neurosurgical team. **Discussion:** Lateral thigh numbness is a common presentation in meralgia paresthetica in which it was the initial differential diagnosis for this patient. However, the symptoms usually ease and improved over the time in most patients. Tarlov cyst on the other hand is a rare disease and its optimal management still remains a controversy. MRI spine plays an important role for diagnosis and further management in future patients with similar presentation.

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8 a.m. vs 8 p.m. Labour Induction with Dinoprostone Vaginal Tablets in Term Pregnancies with Unfavourable Cervices – A Prospective Randomized Controlled Trial

Aizura-Syafinaz Ahmad Adnan, Vikneswaran Virasamy, Noor Azmi Mat Adenan

Department of Obstetric and Gynaecology, Faculty of Medicine, University of Malaya, Kuala Lumpur, Malaysia

ABSTRACT

Objectives: To analyse if it's feasible to time most of our deliveries to happen during office hours and reduce the night time deliveries for the benefit of the patient, fetus and labour ward staff. **Methods:** Patients who fulfilled the inclusion criteria were randomized into 8 a.m. or 8 p.m. induction group according to the randomized sealed envelope given at the time of recruitment. These patients were admitted to labour ward 1 hour before the induction time. 3 mg dinoprostone vaginal tablet was used and the standard induction protocol was applied. The social demographic data, induction details, delivery outcome and satisfaction score were then recorded in the case record form. Post partum patients and labour ward staff in-charge would be asked to complete a questionnaire assessing aspects of quality of care, their satisfaction with regards to timing of admission and patient review and overall satisfaction. **Results:** Total 164 patients were recruited in the study group where 78 were in 8 a.m. group and 86 were in 8 p.m. group. Both groups have the similar baseline characteristics. There was no significant difference between the 8 a.m. and 8 p.m. induction groups in terms of induction of labour to vaginal delivery interval (delivery within 8 a.m. - 5 p.m.: 35.9% vs 44.2 %, $p = 0.339$). Instrumental delivery accounted for 13.0% of the deliveries in 8 a.m. group and 14.1% deliveries in 8 p.m. group. No significant difference ($p = 1.000$) in terms of time of induction and the indication for instrumental delivery. Lower segment caesarean section (LSCS) was slightly lower in 8 a.m. group (23.4%) than in 8 p.m. group (30.6%). Based on the results, no significant differences were observed in terms of the pregnancy outcome (mode of delivery) with $p > 0.05$. Overall, all the neonatal outcomes tested showed no significant difference between the study groups ($p > 0.05$) meaning there's no significant difference in neonatal outcome (Apgar score and Cord PH) in terms of time of induction. Mean maternal satisfaction level in 8 a.m. and 8 p.m. groups were 3.90 (SD=0.92) and 3.98 (SD=0.90) respectively. Mean staff satisfaction level in 8 a.m. and 8 p.m. groups were 3.18 (SD= 1.20) and 3.82 (SD=1.15) respectively. Staff satisfaction level in 8 a.m. group was significantly lower ($p = 0.001$) than the 8 p.m. group. There was significant difference between the staff satisfaction level and the time of induction ($p < 0.001$). There was no significant difference found between the maternal satisfaction level and the time of induction ($p = 0.053$). **Conclusion:** This study shows that there is no significant difference between the two induction groups in terms of time of delivery, mode of delivery, neonatal outcomes and maternal satisfaction. There is however significant difference in terms of delivery staff satisfaction, which favors 8 p.m. induction group ($p < 0.001$).

Analytical Validation of a SNP-Based Non-Invasive Prenatal Test to Detect the 22q11.2 Deletion

Harini Ravi, Gabriel McNeill, Allison Ryan, Zach Demko

Institution: Natera

ABSTRACT

Background: Non-invasive prenatal testing (NIPT) for aneuploidy using cell-free DNA in maternal plasma has been widely adopted. Recently, NIPT coverage has expanded to detect subchromosomal anomalies including the 22q11.2 deletion. Previous validation studies of a SNP-based NIPT for detection of 22q11.2 deletions demonstrated high sensitivity (>95%) and specificity (>99.5%). Here, we validated a revised version of this test in a cohort of pregnancy plasma samples. **Materials and Methods:** Blood samples were obtained from pregnant women with known 22q11.2 status. Ten positive control samples and 390 negative control samples were analyzed using a revised SNP-based NIPT for the 22q11.2 deletion. Samples were amplified and sequenced using pooled primer sets that included 1,351 SNPs spanning a 2.91Mb section of the 22q11.2 region. A risk score was assigned to all samples using a proprietary algorithm. The algorithm's confidence threshold was raised to 0.95 and "high-risk" samples with deletion of the maternal haplotype were reflexively sequenced at high depth of read (14x10⁶ reads/sample). The sensitivity and specificity of the assay were measured. **Results:** Sensitivity of the assay was 90% (9/10), and specificity of 99.74% (389/390), with a corresponding false positive-rate of 0.26% were reported. **Conclusions:** This validation of the revised SNP-based assay in a cohort of pregnancy plasma samples demonstrates a high sensitivity and specificity for detection of the 22q11.2 deletion. Given the benefits of early intervention in patients with the 22q11.2 deletion and the high incidence of the condition, this SNP-based methodology provides a valuable addition to current population-wide prenatal screening approaches.

Congenital Leukemia – A Case Report

Nurul Wahidah Wagimon¹, Nazimah Idris, Krishna Kumar²

¹Department of Obstetric and Gynaecology, Hospital Tuanku Ja'afar Seremban, Jalan Rasah, 73000 Seremban, Negeri Sembilan, ²International Medical University, Clinical Campus, Jalan Rasah, 70300 Seremban, Negeri Sembilan

ABSTRACT

Introduction: Congenital and neonatal leukemia rarely occur, yet carry high mortality rates and pose special problems for the obstetricians, perinatologist and hematologist. Although the etiology is unknown, the presence of leukemia at birth suggests a genetic abnormality and possible intrauterine exposure to drugs or other toxin as contributing factors. **Case Presentation:** We describe a case of congenital leukemia of a baby boy born to a 26-year-old multiparous mother, who, apart from being obese, had no other medical problems. The fetus was identified to be larger than gestational age at term, with an estimated birth weight of 4.5 kg, thus delivery was affected via an elective lower segment caesarean section. Sonographic examination done a day before delivery showed an abdominal circumference of 410 mm and HC:AC ratio 0.8 (low). At birth, the baby was noted to have multiple lymphadenopathy, distended abdomen with hepatosplenomegaly and bluish cutaneous nodules. Initial full blood count of the baby was anaemic (haemoglobin level 7 g/dl), had hyperleucocytosis (total white blood cell count 412x10⁹) and thrombocytopenic (platelet count 29x10⁹). A diagnosis of congenital Beta-cell acute lymphoblastic leukemia was suggested by immunophenotyping. The baby received and completed the induction phase of chemotherapy regime in the form of 6 doses of intramuscular L-asparaginase (ASPA). However, there were episodes of relapses during the maintenance phase in March 2017 and he passed on at 4 months of life. **Discussion and Conclusion:** Detecting congenital leukemia in the antenatal period is definitely a challenge to the obstetrician. In situations where the measurement of abdominal circumference is beyond 90th centile and the HC:AC ratio is abnormally low, hepatosplenomegaly should be suspected and further evaluation done. The middle cerebral artery Doppler study may be useful when there is severe fetal anaemia. In such situations, appropriate counselling should be done to the parents and preparation for neonatal care organized.

100% Post-warmed Survival Rate for 1491 Blastocysts in Alpha Fertility Centre

Low SY, Lee CS.S, Lim YX

Alpha International Fertility Centre, 31, Level 2, Jalan PJU 5/6, Dataran Sunway, Kota Damansara, 47810, Petaling Jaya, Selangor, Malaysia

ABSTRACT

Introduction: With the benefit of better endometrium receptivity in unstimulated cycles and supported by good post-warmed blastocysts survival rate, it is now clear that pregnancy rates for frozen blastocyst transfer is better than the transfer of fresh blastocysts. Alpha Fertility Centre has adopted the Cryotec Method for blastocyst vitrification and warming since July 2013. This study demonstrates the post-warmed survival rate for 1491 blastocysts in 1011 frozen blastocyst transfers (FBT). **Materials and Methods:** Since the commencement of the use of Cryotec Method in July 2013 till now (May 2017), Alpha Fertility Centre had vitrified and warmed 1491 blastocysts using the Cryotec Method for 1011 FBT patients. Only blastocysts which developed to at least expanding stage (quality of at least BG3BB according to Gardner's Blastocyst Grading System) were vitrified and warmed. The blastocyst vitrification and warming protocols were conducted according to manufacturer's protocols (Cryotech, Japan). The number of FBT cycles for each age group was 621 (<35 years old), 182 (35-37 years old), 111 (38-39 years old), 70 (40-41 years old) and 27 (≥ 42 years old). The number of blastocysts vitrified and warmed for each age group was 954, 258, 149, 91 and 39 respectively. **Results:** Of the 1491 blastocysts warmed, all blastocysts survived with morphologically intact inner cell mass and trophectoderm cells with no degradation in quality. **Discussion:** This study shows that by using the Cryotec Method, we consistently achieved 100% post-warmed survival rate in blastocysts.

Blastulation and Blastocyst Utilisation Rate of Vitrified-Warmed Donor Oocytes vs Fresh Donor Oocytes

Lim MW, Lee CSS

Alpha International Fertility Centre, 31, Level 2, Jalan PJU 5/6, Dataran Sunway, Kota Damansara, 47810, Petaling Jaya, Selangor, Malaysia

ABSTRACT

Objectives: Since the introduction of a robust vitrification method: the Cryotec Method, Alpha Fertility Centre (AFC) was able to establish an oocyte-banking program. Some programs have reported lower rate of blastocyst formation with the use of vitrified-warmed oocytes (Braga et al., 2016) while others reported similar blastulation and utilisation rates (Fischer et al., 2017). This is a retrospective and cohort study to examine the blastulation and blastocyst utilisation rates between the use of vitrified-warmed donor oocytes and fresh donor oocytes in AFC. **Methods:** This study included 751 mature oocytes obtained from 19 oocyte donors in our centre. Of those, 462 fresh oocytes were allocated to 24 recipients (Group A) while 289 oocytes were cryobanked for 24 thaw cycles (Group B) between May 2014 and April 2017. Oocytes from Group B were vitrified and warmed using the Cryotec Method (Cryotech, Japan). All oocytes had Intra-Cytoplasmic Sperm Injection (ICSI) and the resultant embryos were cultured to day 5 and day 6. The fertilisation, blastocyst formation and utilisation which includes blastocyst of high enough quality to either be transferred, biopsied or cryopreserved according to Gardner's Grading, were observed for both groups. All data were collected and compared from the same cohort of donors in the same period. The mean donor age was 23.7 for both groups whereas the mean paternal age was 46.0 for Group A and 43.3 for Group B ($p > 0.05$). **Results:** The fertilisation rate was similar in both group A and B (69% and 65.1% respectively). However, there is a significant decrease ($p < 0.05$) in blastocyst formation from embryos derived from vitrified oocytes (blastulation per 2PN in Group B = 66.4%) compared to those derived from fresh oocytes (blastulation per 2PN in Group A = 79.5%). Similarly, the blastocyst utilised per 2PN was significantly lowered ($p < 0.05$) in Group B (34.6%) compared to their fresh counterpart in Group A (47.9%). **Conclusion:** While our centre was able to achieve high blastulation and blastocyst utilisation rates in embryos derived from vitrified-warmed oocytes, our preliminary study suggests that oocyte vitrification followed by ICSI may lead to lower embryo developmental competence compared to when fresh oocytes were used, and thus, the insemination of fresh oocytes should be preferred. Nevertheless, albeit the lowered rates, the use of cryopreserved oocytes allows better logistics and convenience to the donors, recipients and IVF centres. Sub-/infertile patients will also have more choices in the selection of oocytes and greater flexibility in timing of their IVF cycle.

The Cryotec Method yields 100% Post-warmed Survival Rates in Day 3 Cleavage Stage Embryos and its Blastomeres

Chooi JMS; Lee CSS; Lim YX

Alpha International Fertility Centre, 31, Level 2, Jalan PJU 5/6, Dataran Sunway, Kota Damansara, 47810, Petaling Jaya, Selangor, Malaysia

ABSTRACT

Objective: In our previous report in 2016, we achieved 100% post-warmed survival rate for all cleavage stage embryos vitrified using the Cryotec Method. Cryotec is an innovative method of vitrification to preserve oocytes and embryos of any developmental stage. Here in this study, we further demonstrate the efficacy of the Cryotec Method through analysis of a greater sample size, establishing the validity of the earlier findings. **Materials and methods:** A total of 111 Day 3 cleavage stage embryos with 897 blastomeres underwent cryopreservation by vitrification and subsequently warmed for FET cycles using Cryotec Vitrification and Warming Media since we commenced Cryotec Method from July 2013 until now (April 2017) in Alpha Fertility Centre. The study consists of 57 cases with patients in the age range of 18 to 44 with a mean age of 35.3. Practitioner techniques for vitrification and warming were adhered to manufacturers outlined SOPs (Cryotech, Japan). All embryos ranged from 5 cells to 14 cells with <15% fragmentation and were derived from either intracytoplasmic sperm injection or in-vitro fertilization. The survivability of embryos and its blastomeres were assessed in terms of the number of intact or lysed cells upon warming. **Results:** After Cryotec warming, all 111 embryos survived with no degradation in quality, yielding 100% post-warmed embryo survival rate. Furthermore, the blastomere survival rate also achieved 100%, indicated by the 897 healthy and intact blastomeres and the absence of lysed cells upon observation. The survivability of embryos was not affected by the number of cells nor degree of fragmentation. **Conclusion:** This study validates that the use of Cryotec Method for embryo vitrification and warming consistently achieved 100% post-warmed survival rates in Day 3 cleavage stage embryos and blastomeres in Alpha Fertility Centre. The Cryotec method realizes the total potential of embryo cryopreservation and proves to be superior compared to other vitrification methods practiced in ART laboratories worldwide today.

Clinical Outcome of Blastocysts derived from Frozen Donor Oocytes versus Fresh Donor Oocytes in Fresh Blastocyst Transfer Cycles

Siew SC, Lee, CSS, Lim YX, Leong WY

Alpha International Fertility Centre, 31, Level 2, Jalan PJU 5/6, Dataran Sunway, Kota Damansara, 47810, Petaling Jaya, Selangor, Malaysia

ABSTRACT

Objectives: The Cryotec method has been employed in all frozen-warmed cycles at Alpha Fertility Centre (AFC) since July 2013. With the Cryotec method, we have consistently achieved 100% post-warmed survival rates of embryos (Lee et al, 2016), and a near 100% post-warmed survival of vitrified oocytes (Lui et al, 2016). This robust cryopreservation method has enabled us to establish oocyte banking in AFC since 2014. In this study we compare the clinical outcome of vitrified-warmed oocyte and fresh oocytes in patients undergoing oocyte donation program. **Methods:** Forty-one women underwent fresh blastocyst transfer using anonymously donated oocytes at Alpha Fertility Centre, Malaysia from March 2014 until December 2016. Nineteen of these patients were allocated with vitrified-warmed donated oocytes (Group A) while 22 patients received donated oocytes from fresh retrievals (Group B). Oocytes from Group A were vitrified and warmed using the Cryotec method (Cryotech, Japan). All oocytes had Intra-Cytoplasmic Sperm Injection (ICSI) and resultant embryos were cultured to day 5 or 6. The mean age of oocyte donors in Group A and Group B was 23.2 and 24.4 respectively ($p>0.05$); and mean age of recipients was 41.0 and 39.8 respectively ($p>0.05$). All recipients underwent a medicated transfer cycle using down regulation with Intra-muscular Depot Leucrin 3.75 mg, and endometrial priming with oral oestrogen (Progynova) in graduated doses. Progesterone pessaries were administered daily 7 days prior to the transfer. Blastocysts were transferred using standard embryo transfer (ET) protocols. **Results:** In Group A, a total of 284 oocytes were warmed. Two-hundred-and-seventy-two oocytes survived (Post-warmed Survival Rate: 95.8%). One patient in Group A failed to reach ET due to poor blastocyst quality obtained; while all patients in Group B progressed to ET. The mean number of blastocysts transferred was 1.8 and 2.0 for Group A and Group B respectively ($p>0.05$). Clinical Pregnancy Rate (CPR) for Group A was 66.7% and for Group B was 63.6%. Implantation Rates (IR) were 46.9% and 51.2% for Group A and B respectively. There was no statistical significance ($p>0.05$) found in CPR and IR between both groups. **Conclusion:** This study shows that vitrified-warmed donor oocytes using the Cryotec method yield clinical pregnancy and implantation rates comparable to fresh donor oocytes.

Pre-implantation Genetic Screening (PGS) Significantly increases Clinical Pregnancy and Implantation Rates following Frozen Blastocyst Transfer

Lee CSS, Siew SC, Lim YX

Alpha International Fertility Centre, 31, Level 2, Jalan PJU 5/6, Dataran Sunway, Kota Damansara, 47810, Petaling Jaya, Selangor, Malaysia

ABSTRACT

Objectives: To evaluate whether the use of Pre-implantation Genetic Screening (PGS) significantly improve the clinical outcome for IVF patients following FET cycles at Alpha Fertility Centre, Malaysia. **Methods:** Seven-hundred-and-eighty-six (786) patients who had vitrified-warmed blastocysts transferred from July 2013 to December 2016 were analysed. In the non-PGS-group, blastocysts were vitrified without biopsy. In the PGS-group, 2-8 trophectoderm cells were biopsied before the blastocysts were vitrified. PGS was performed using either Micro-array Comparative Genomic Hybridisation (MaCGH) or Next Generation Sequencing (NGS). All blastocysts were vitrified on day 5 and/or day 6; and warmed using the Cryotec method (Cryotech, Japan) for elective FET. The cases were stratified into 5 age groups: <35, 35-37, 38-40, 41-42 and >42. In each age group, number of cases in non-PGS-group and PGS-group were 258 vs 231, 68 vs 67, 60 vs 61, 20 vs 13 and 4 vs 4 respectively. A total of 683 unscreened blastocysts and 487 euploid blastocysts were warmed and transferred in non-PGS-group and PGS-group respectively. All 1170 blastocysts survived post-thaw with morphologically intact inner cell mass and trophectoderm cells (100% post-thaw survival rate). All 1170 blastocysts that had been thawed were transferred. Clinical pregnancy and number of gestational sacs (IUGS) were determined using ultrasound. **Results:** The mean age of patients in each group was similar ($p>0.05$): non-PGS-group was 32.2 (range 18-44) and PGS-group was 32.2 (range 18-43). The mean number of blastocysts transferred was 1.7 and 1.3 for non-PGS-group and PGS-group respectively ($p<0.0001$). CPR for PGS-group was significantly higher than non-PGS-group (66.2% vs 55.9%; $p=0.0034$), particularly in age group 35-37 (71.6% vs 54.4%; $p=0.0499$) and 41-42 (69.2% vs 20.0%; $p=0.0096$). Correspondingly, implantation rate (IR) for PGS-group was also significantly higher than non-PGS group (60.2% vs 46.9%; $p=0.0001$). IR was statistically significant for all age groups more than 34 years old: 35-37(66.7% vs 44.9%; $p=0.0032$), 38-40(54.1% vs 32.6%; $p=0.0069$), 41-42(71.4% vs 14.7%; $p=0.0003$) and >42(75.0% vs 0.0%, $p=0.0242$). (30.7% vs 55.0%, $p=0.0001$). **Conclusion:** PGS significantly increases the IR compared with non-PGS cases in frozen blastocyst transfer. PGS also significantly increases the CPR compared with non-PGS cases in frozen blastocyst transfer even with a lower mean number of blastocysts transferred (1.3 vs 1.7).

A 5 Year Review (2010-2014) of Stillbirths from the National Obstetrics Registry, Malaysia

Dr Shamala Devi Karalasingam¹, Dr J Ravichandran R Jeganathan², Sharul Amin Soelar³

¹National Clinical Research Centre, Hospital Kuala Lumpur, ²Hospital Sultanah Aminah, Johor, ³Clinical Research Centre, Alor Star, Kedah

ABSTRACT

Introduction: In 2014, the World Health Assembly endorsed a target of 12 or fewer stillbirths per 1,000 births in every country by 2030. In Malaysia stillbirth is death of fetus from 22 weeks onwards or 500 grams. **Methodology:** This is a retrospective cohort study over a 5-year period from 1st January 2010 to 31st December 2014. Data was obtained from the National Obstetrics Registry, Malaysia. It is an online data base that captures obstetric data from 14 tertiary hospitals which represents approximately one third of the deliveries in Malaysia. The analysis were performed using Stata Statistical Software. Pearson's Chi-square test for Independence was used to study association between Categorical Data and Categorical Data while Fisher's exact test was used if assumptions of Pearson's Chi-square test for Independence are not met. All probability values were used two-sided and a level of significance of less than 0.05 (p -value < 0.05) was considered as statistically significant. **Results:** During the 5-years duration, there were 654,390 patients registered in the registry. Malays were (74.5%) followed by Chinese (6.4%) and Indian (5.0%). Most patients were 25 to 29-year-old (35.0%) in age group 30 to 34-year-old (25.1%) followed by age group 30 to 34 year-old (25.1%). Mean age for our patients was 28.6-year-old (standard deviation = 5.72). The stillbirth rates from 2010-2014 were 4.1, 5.2, 4.9, 5.0 and 3.9 per 1,000 births. With increasing maternal age and parity the stillbirth rates were higher. Stillbirth rates were higher among babies that were < 1,500 gms, severe preterm (22-<28 weeks) and women of Indian ethnicity. In women with co-morbidities stillbirth rates were higher in women with pre-existing Diabetes and Chronic hypertension as compared to Gestational Diabetes and hypertension. Small for gestational age babies that were severe preterm had the highest stillbirth rate at 44.4 per 1,000 livebirths. **Discussion:** Preconception counselling in women with co-morbidity and improved pregnancy care is important to reduce stillbirths. Women are up to 4 times more likely to have stillbirths if they had a previous stillbirth. Pregnancies after a stillbirth should be closely monitored. Every effort must be taken to prevent preventable stillbirths.

Standardizing a Comprehensive Patient-centered Outcome Measurement Set for Pregnancy and Childbirth: An International Collaborative

Stephanie Wissig¹, Caleb Stowell¹, Arie Franx², Dr J Ravichandran R Jeganathan, Dr Shamala Devi Karalasingam³, Rob Peterson⁴, Stefan Gebhardt⁵, James Duffy⁶, Isis Amer⁷, Elliot main, Malini Nijagel, Micheal Owens, Tracy Flanagan, Racheal Thompson⁸, Floris Goendendaal, Gouke Bonsel, Irwin Reiss, Marije de Ruiter⁹

¹International consortium for Health outcomes measures, Boston USA, ²Utrecht Medical Center, Utrecht, Netherlands, ³ICHOM Pregnancy and Childbirth Working Group, Malaysia, ⁴ICHOM Pregnancy and Childbirth Working Group, Australia, ⁵ICHOM Pregnancy and Childbirth Working Group, South Africa, ⁶ICHOM Pregnancy and Childbirth Working Group, United Kingdom, ⁷ICHOM Pregnancy and Childbirth Working Group, Sweden, ⁸ICHOM Pregnancy and Childbirth Working Group, USA, ⁹ICHOM Pregnancy and Childbirth Working Group, Netherlands

ABSTRACT

Introduction: Value-based healthcare aims to optimize patient outcomes while minimizing healthcare costs. To improve value in maternity care using this strategy, standard outcomes must first be defined. Aim was to define a minimum, internationally appropriate Standard Set of outcome measures for evaluating and improving maternity care with a focus on outcomes that matter most to women. **Methodology:** An international Working Group of obstetricians, midwives, neonatologists, registry leaders, outcomes researchers, and consumers representing seven countries and five continents was assembled. Existing literature and current measurement initiatives were reviewed. Serial guided discussions and validation surveys provided consumer input. A series of 8 teleconferences, incorporating a modified Delphi process, were held to reach consensus on the final Standard Set. **Results:** The WG selected a concise set of outcomes measures to evaluate care from pregnancy through 6 months postpartum. Key clinical outcomes include maternal and neonatal mortality and morbidity, stillbirth, preterm birth, and birth injury. Patient-reported outcome measures (PROMs) were included to assess health related quality of life, mental health, mother-infant bonding, confidence and success with breastfeeding, incontinence, and satisfaction with care and birth experience. To support analysis of these outcome measures, pertinent baseline characteristics and risk factor metrics were also defined. **Conclusion:** We propose a Standard Set of outcomes for evaluating the care of women from pregnancy through the postpartum period that we recommend all providers track. While validation and refinement via pilot implementation projects is needed, we view this as an initial step towards value-based improvements in maternity care.

Awareness, Knowledge of HPV Related Diseases and Cancers and HPV Vaccine in Male Population in an Urban Area

Nur Shahanum Bt. Mohd Nahrerawi, Nugueslis Razali, Sofiah Sulaiman, Jamiyah Hassan

University of Malaya, Kuala Lumpur

ABSTRACT

Objectives: To assess the awareness and knowledge on Human Papilloma Virus (HPV) related diseases and cancers and HPV vaccine among males in an urban population. **Methods:** The study was conducted in University Malaya Medical Center, Kuala Lumpur. One to one questionnaire survey was distributed to male population within UMMC premises from October to December 2016. 350 male respondents voluntarily agreed to participate in the study. The demographic details, level of education, marital status and occupation of the respondents were documented. The awareness, knowledge of HPV related diseases and cancers were assessed. The knowledge on the availability of the HPV vaccine, the potential side effects and the willingness to take the vaccine were also assessed. **Results:** 4.6% of the respondents were less than 19 year old, 86.3% were from the age of 20 to 39 year old, 8.6% from the age of 40 to 59 year old and 0.6% for more than 60 year old. 57.7% of the respondents had never heard about HPV vaccine compared to 42.3% who were aware of the availability of the vaccine. 89.9% from the group of respondent that have heard about the vaccine had received tertiary education level whereas the other 10.1% had received their secondary education level. 58.9% of married man would like to be vaccinated compared to 41.1% of single man. 61.5% of the respondents think adult men should be vaccinated. 53.4% also said that teenage boys should also be vaccinated. 48.8% of the respondents are willing to be vaccinated without knowing the side effects. **Conclusions:** The awareness of HPV related diseases, its consequences and HPV vaccine among males are still low. Awareness educational program and educational leaflets for the males population should be increased as HPV infection are very common and HPV related diseases and a cancer affects both genders. The study was approved by UMMC Ethics Committee: MREC ID NO: 201610224403

Prevalence of Teenage Pregnancies and Obstetric Outcomes in Hospital Tuanku Ja'afar Seremban (HTJS), Negeri Sembilan, Malaysia: A Retrospective Study

Kavitha Nagandla¹, Krishna Kumar², Faridah Hanim Binti Zam Zam³, Lee Hong Wei⁴, Liow Ying Wei⁴, Kiong Chean⁴, Quistina Akmal Yunos Kamdi⁴

¹Senior Lecturer, Department of O&G, International Medical University, Seremban, ²Consultant and Head of Department O&G, Hospital Tuanku Ja'afar, Seremban, ³Specialist, Department O&G, Hospital Tuanku Ja'afar, Seremban, ⁴Semester 8 students, International Medical University, Seremban

ABSTRACT

Objective: To determine the prevalence of teenage pregnancy and compare their obstetric and perinatal outcomes with non-teenage pregnancies. **Method:** Records of teenage pregnant women aged between 11-19 from National Obstetric Registry, Malaysia (NOR) of Hospital Tuanku Ja'afar Seremban over a 12-month period between May 2015 and May 2016 were selected (n=164). For each pregnant woman, socio-demographic profile, obstetric outcomes and perinatal outcomes were determined. The results were compared with a control group comprised of 169 pregnant women aged 20-30 years, who also delivered in Hospital Tuanku Ja'afar Seremban in the same period. **Results:** The prevalence of teenage pregnancy was 2.8%. The mean age of the teenage group was 17.98 whereas the control group was 26.42. The study showed that teenage mothers had a significantly higher risk of anemia (p=0.005), episiotomy (p<0.0001), preterm labour (p=0.001) and delivering low birth weight babies (p=0.001). There were no significant differences in mode of delivery, antenatal complications, birth outcomes, APGAR score at 5th minutes and neonatal complications between the two groups. **Conclusion:** Teenage pregnancy was correlated with increased risks of anemia, episiotomy, preterm labour and delivering low birth weight babies.

KEY WORDS:

Teenage pregnancies, prevalence, obstetric outcomes, perinatal outcomes

Admission of Term Babies to Paediatric Unit: An Audit of Outcomes

Azwin Hamran, Vallikannu Narayanan, Imelda Balchin

ABSTRACT

Objective: To determine the rate, reason, and outcomes of term babies admission to paediatric unit. **Methods:** All babies born ≥ 37 weeks gestation admitted to paediatric unit between November 2015 to April 2016 at University Malaya Medical Centre were identified, and both maternal and neonatal records retrieved to assess factors that lead to admission to paediatric unit. **Results:** There were a total of 2,647 births. Of these 2,505 (94.6%) deliveries were born at term. There were 159 (6.35%) babies transferred to paediatric unit with 54 (2.15%) babies were admitted to Intensive Care (NICU and PICU). Total of 27 (17%) babies require intubation upon delivery. There were 21 (13.2%) cases who arrived in labour without prior antenatal care at UMMC with 7 (4.4%) babies were born before arrival to hospital. The primary reason for admission was respiratory cause, 83 (52.2%) followed by sepsis/presumed sepsis, 39 (24.5%), congenital abnormality, 26 (16.4%), infant of diabetic mother, 21 (13.2%), asphyxia and poor condition, 18 (11.3%) and birth trauma 7 (4.4%). Total numbers of 20, (6.94%) babies had elective caesarean section which require admission to neonatal unit. Mean gestational age for Elective Caesarean section 37.8 weeks. Total of 12 (60%) cases from Elective Caesarean Section require admission for respiratory cause. Preventable admission 5 (41.7%) from asphyxia and poor condition, 4 (33.3%) cases with delayed action upon pathological CTG. The discharged diagnoses were infant of diabetic mother, 58 (36.5%), sepsis/presumed sepsis, 39 (24.5%), respiratory causes, 19 (12.0%), neonatal jaundice, 18 (11.3%), subaponeurotic haemorrhage, 9 (5.7%) and Hypoxic Ischemic Encephalopathy, 1 (0.6%). Majority of the babies were discharged home, 157 (98.7%), 1 (0.6%) baby was transferred to IJN for further care and intervention. 1 (0.6%) case had early neonatal death for congenital abnormality. **Conclusion:** Term babies admissions can contribute significantly to workload and financial impact. It can lead to short term morbidity causing social disruption of birth experience for the parents. Majority of term admission had short duration of admission which indicate the reason of admission were self limiting and non life threatening reasons. Recommendations to improve admissions, firmer adherence following elective LSCS guidelines by planning for delivery at 39 weeks for uncomplicated pregnancy and improve intrapartum care by having more training in CTG interpretation and diligent monitoring intrapartum.

Computerized Intrapartum Electronic Cardiotocograph (CTG): An Audit of Compliance and Outcome to Identify Areas for Practice Improvement

Fazlin Azihan Harun, Imelda Balchin

Department of Obstetrics and Gynecology, University Malaya Medical Center, Malaysia

ABSTRACT

Objectives: To assess if introduction of digital CTG pop-up box with the guidance for CTG interpretation improves the rate of compliancy review, accuracy of interpretation, prompt action taken on pathological CTG and the rate of adverse perinatal outcome. The digital guidance for CTG interpretation aim to support decision making during labour and improve the quality of intrapartum fetal monitoring and its management in maternity services. **Methods:** Intrapartum data and CTG were collected on labouring women at UMMC from December 2015 to the end of June 2016. We introduced a digital system to aid interpretation of CTG in March 2016. Our study period was three months before and three months after this date. Comparisons were made between conventional CTG paper tracings with digital CTG, specifically in cases diagnosed as 'fetal distress'. Two reviewers agreed on accuracy of CTG interpretation. Data were also collected on adverse neonatal outcomes during this study period. These are term newborns admitted to Neonatal Unit, Low Apgar score (less than 7 at 5 minutes of life), and cord pH less than 7.1. In these newborns, we assessed the documented rate of CTG reviews, the accuracy of CTG interpretation and whether appropriate action was taken when CTG was interpreted as 'pathological'. Comparison on the compliancy of CTG reviews, accuracy of CTG interpretation, the rate of documented prompt action taken on pathological CTG and the rate of adverse perinatal outcome is compared. **Results:** Documentation on the compliance of CTG review every 30 minutes were statistically significantly different between the two periods 14.7%, (95% CI 9.3-20.2) vs 46.4%, (95% CI 38.5-54.3). Accurate CTG interpretation as per NICE Guideline was found in 42.9%, (95% CI 35.3-50.5) prior to implementation of digital CTG and shows improvement 56.8%, (95% CI 49.0-64.7), although it is not statistically significant. Prompt action taken for pathological CTG shows statistically significant difference between both group 33.4% (95% CI 27.1-41.7) vs 58.8% (95%CI 49.0-64.7). The adverse perinatal outcome improved although it is not statistically significant 27 % (95% CI 20.2-33.8) in conventional CTG vs 17% (95% CI 11.1-23.0) in digital CTG, most likely due to the small sample size. **Conclusion:** This study has shown that the introduction of digital CTG pop up box to guide CTG interpretation have significantly improved the compliancy of CTG review, and the rate of prompt action taken on pathological CTG.

Wernicke's Encephalopathy following Hyperemesis Gravidarum

Nurulhuda Abdul Rahman, MD

Department of Obstetrics and Gynaecology, Hospital Tuanku Ja'afar Seremban

ABSTRACT

Introduction: Wernicke's Encephalopathy is a serious neurological disorder induced by thiamine, Vitamin B1 deficiency. Dr Carl Wernicke, a German neurologist described it in 1881 as a triad of acute mental confusion, ataxia and ophthalmoplegia. It may develop in non-alcoholic condition such hyperemesis gravidarum and prolong starvation. We reported a case of Wernicke's Encephalopathy in our center following hyperemesis gravidarum. **Case Report and Discussion:** A 37 years old Indonesian lady who is in her fifth pregnancy was brought in by her husband to screening room after he noticed that his wife was verbally less responsive and keeps on starring at him for a week. She had thrice admission to hospital for hyperemesis gravidarum for this current pregnancy. On examination, she had nystagmus with conjugate gaze palsies which required her to have frequent head movement instead of her eyes. She had peripheral neuropathy and power assessment were only 3 for each limb. She obeyed simple commands but had slight of agitation, confusion and inattentiveness. Her TFT that was taken during last admission showed hyperthyroidism. No other clinical finding correlated to the thyrotoxicosis except her flapping tremor. Cardio-respiratory and Gastrointestinal system were unremarkable. Diagnosis of Wernicke's Encephalopathy and gestational thyrotoxicosis were established. Further blood investigation revealed hypokalaemia and folate deficiency. Intravenous Parenterovite and intramuscular thiamine were commenced. She was also given T. Prophylthiouracil as benefit to treat thyrotoxicosis. Serum potassium level was corrected. With the above treatment, her eye gaze improved and she was able to communicate as usual. Her muscle power was 4 over 5 and she started to recall the past. By day 7 of treatment, she was able to ambulate and feed herself. She had neither retrograde nor anterograde amnesia but the care taker claimed she had mild visual hallucination. **Conclusion:** Hyperemesis gravidarum constitute 0.3 to 3.6% cases that complicate pregnancy during first trimester. Suboptimal management of hyperemesis gravidarum might lead to Wernicke's Encephalopathy. This is the most serious neurological complication that can lead to death. Identifying the unique character of Wernicke's Encephalopathy and early thiamine initiation are the crucial part of treatment to ensure better prognosis.

Pregnancy complicated with Ruptured AVM: A Case Report

Dr Ramesh Kuppusamy

Assoc Professor in Obstetrics and Gynecology, University Malaya Medical Center, Kuala Lumpur

ABSTRACT

Arteriovenous malformations (AVMs) are the most dangerous of the congenital vascular malformations with the potential to cause intracranial haemorrhage and epilepsy in many cases. AVMs are considered to be type of congenital developmental vascular lesions and occur in 0.1% of the population. Ruptured AVM is a known cause of hemorrhagic stroke. The incidence in pregnancy is unknown because some of these AVMs can be asymptomatic. Besides AVMs, pre-eclampsia and eclampsia are associated with intracranial hemorrhage (ICH). Other independent factors for ICH include advanced maternal age and multiple pregnancy induced hypertension occurrences. Ruptured AVM in pregnancy results in severe complications with high maternal mortality and poor prognosis. Delay in symptom-onset to diagnosis time and pre-eclampsia showed correlation with poor maternal outcome. However, there is no increased risk of haemorrhage found in patients with AVM either during pregnancy or puerperium. In this paper, we report a patient who came with acute ruptured AVM. Mrs. S, a 35 year old in her second pregnancy, presented to the Emergency Department at 30 weeks of gestation, with reduced consciousness, a prior history of headache, right-sided hemiparesis and slurred speech. She was a chronic smoker for 10 years. An urgent CT scan of the brain showed acute bleed from left parieto-temporal intraparenchymal region with perilesional edema, mass effect and midline shift. The following MRA and MRV showed suspicious AVM with acute bleeding. Cerebral angiogram confirmed presence of ruptured left temporo-parietal AVM. An MDT was called and management discussed with all the stakeholders. She underwent cerebral embolization of the ruptured left temporo-parietal AVM. She recovered well and subsequently had uneventful delivery via Caesarean section at 33 weeks. She was discharged well ten days post-delivery. The neurosurgical team has planned for a definitive treatment for the AVM at eight weeks post-delivery. Brain AVMs can be detected on computed tomography (CT) or magnetic resonance imaging (MRI). MRI is more sensitive, particularly in setting of an acute intracerebral haemorrhage. Angiography on the other hand is the gold standard for the diagnosis, treatment planning, and follow-up after treatment of brain AVMs. Management of haemorrhagic stroke is similar to non-pregnant women and this often involves neurosurgical intervention, including surgical, endovascular and radio surgical treatment. High clinical index of suspicion, with multidisciplinary team approach which include neurosurgeon, obstetrician and anaesthetist and early intervention have an impact on survival in ruptured AVM in pregnancy.

Pregnancy Outcome and Cord Blood Cotinine Level: A Cross-sectional Comparative Study between Secondhand Smokers and Non-secondhand Smokers

Dr Bahiyah Abdullah, Muadz Baharom, Dr Norizal Mohd Noor, Dr Nurhuda Ismail, Dr Noor Kaslina Mohd Kornain, Dr Methyl Kannan Kutty

Faculty of Medicine, UiTM

ABSTRACT

Objective: To compare the pregnancy outcome and cord blood cotinine levels between secondhand smokers and non-secondhand smokers. **Study Design:** This was a cross-sectional comparative study in a Malaysian tertiary obstetric hospital involving 200 non-smoking pregnant women at term, of whom 100 were secondhand smokers and 100 were non-secondhand smokers. Those with multiple pregnancies, with a body mass index (BMI) of more than 30 kg/m² or who delivered by Caesarean section were excluded. The participants' basic demographic details, delivery details, neonatal outcome and placental weight were recorded. Umbilical cord blood samples were obtained, and cord blood cotinine levels were measured with a Cotinine ELISA kit. The primary outcomes were baby's birth weight, length, and head circumference, Apgar score at 5 min and placental weight. The secondary outcome was difference in cord blood cotinine levels between the two groups and the correlation of these differences with the neonatal outcome. **Results:** The secondhand smoker group had significantly lower baby weight (2.94±0.31 kg vs 3.05±0.40 kg), head circumference (30.87±2.35 cm vs 37.13±2.36 cm), length (46.58±1.95 cm vs 51.53±2.05 cm) and placental weight (520±73.5 g vs 596±61.3 g) and significantly higher cord blood cotinine levels (16.35±12.84 ng/mL vs 0.56±0.22 ng/mL). Cord blood cotinine levels had significant negative correlations with placental weight (r=-0.461), baby's weight (r=-0.297), baby's head circumference (r=-0.501) and baby's length (r=-0.374). **Conclusion:** Second hand smoke increases the incidence of adverse pregnancy outcomes (newborns' anthropometric measurements and placental weight) and causes higher cord blood cotinine levels.

Learning Styles among Trainee in Master of Obstetrics and Gynaecology at University Malaya Medical Centre

Dr Haliza Kamarudin, Prof Imelda Balchin

ABSTRACT

The Masters' programme in obstetrics and gynaecology has been established in Malaysia since 1988. Trainees come from all over Malaysia with different background. Learning styles theory predicts that matching learning preference with learning styles will enhance learning (Javier Lesmes-Anel et al). Studies have shown that, individuals react differently to identical learning experiences, and individual learners have a preferred learning style which motivates their learning (Willingham, 2015). **Objective:** There are 4 learning styles described by Honey and Mumford (1992). These are activist, theorist, reflector and pragmatist. We wanted to determine the preferred learning styles amongst Masters trainees in Obstetrics and Gynaecology (O&G), so that training and teaching styles could be matched with preferred learning styles. **Methodology:** Validated questionnaires on learning styles were distributed to previous Masters trainees in O&G from University Malaya Medical Centre that enrolled between 2005-2011. Exclusion criteria: Non-Malaysian trainee. The questionnaires consist of 2 parts. Part 1 is the demographic questionnaire. Part 2 of the questionnaire is the Honey and Mumford Learning style questionnaire (LSQ). **Results:** The predominant learning styles amongst ex-trainees are: reflector (n=26, 43.3%) and theorist (n=23, 38.3%). **Discussion:** Masters trainees in obstetrics and gynaecology learning styles are mainly theorist and reflector. Reflectors tend to reflect on their experiences and observe from different perspectives. Reflectors tend to gather the needed data first and from others, before coming to their own conclusion. Theorist learn by learning the theory behind the actions. Concept, facts and model will help their learning process. They are good at translating complex observations into logical sound theories. Learning activities that are more suited for reflector learners include critical appraisal sessions with supervisors, regular feedbacks from the trainer, and regular reflective practice. Reflector will improve their training if the supervisor/mentor immediately gives feedback post procedure for example in situation where there are difficult c-section, post laparoscopic procedure or after performing TAHBSO. Theorist on the other thrives on evidence based learning. Having set of protocols or guidelines in the department will help the theorist to learn. Theorist will study latest guideline, evidence based medicine or latest publication and will analysed before applying it to their daily practice. Regular updates on latest evidence based learning and practice. Practices such as having weekly journal club is most suitable for theorist learners. Weekly labour room teaching, analysing CTG and bad outcomes, managing difficult and complex cases in the wards.

Clinical Audit: Predictors of Fetal Distress leading to Caesarean Section in Ampang Hospital

Wong WH, Yeoh ZN, Sharmini K, Wan Shahrul Liza S, Muralitharan G

Department of Obstetrics and Gynaecology, Ampang Hospital

ABSTRACT

Background: Caesarean section (CS) rates in Ampang Hospital (AH) were on the rise in January-April 2016. 1/3 of CS was done for fetal distress (FD). Therefore, reducing CS for FD will effectively reduce CS rate. **Standard and Target:** The World Health Organisation (WHO) stated that CS rates above 10-15% confer no additional health benefits. However, increasing CS rates is a global concern. Our target CS rate was set at 26.5% as per UK CS rates. **Methodology:** A retrospective audit was conducted in January-December 2016. The first round of audit was done in January-April 2016. Based on the findings, changes were implemented in May 2016. A re-audit was conducted in June-December 2016. **Results of First Round:** The CS rates in January-April 2016 rose from 22.3% to 27.4% to exceed the target of 26.5%. **Implement Change:** In effort to reduce CS rates, senior registrar involvement was made compulsory for diagnosis of FD, alongside conducting cardiotocography (CTG) workshops and enforcing CTG machine maintenance. **Re-Audit:** However, despite implementing changes, the CS rates in June-December 2016 continued to rise, from 24.7% to 29.4%. The average CS rates prior to and after implementation of changes increased from 24.7% to 27.3% (p=0.18503). Of 750 CS for FD in 2016, 590 (78.7%) had CTG abnormalities, 297 (39.6%) had meconium stained liquor, but only 168 (22.4%) had antenatal risk factors. For the neonatal outcomes, only 5 (0.7%) had cord arterial pH <7 and only 10 (1.3%) had 5-minute Apgar score <7. **Discussion:** Further strategies that may be employed for re-audit include not doing CTG for low-risk pregnancies and considering fetal blood sampling for pathological CTG. This continuous audit will be valuable for future development of a national guideline.

Successful Introduction of Modified Obstetric Early Warning Score (MOEWS) in a Tertiary Centre in Malaysia – An Audit on Compliance and Performance

Prof Imelda Balchin, Dr Lindy Bak Li Mei

University Malaya Medical Center (UMMC)

ABSTRACT

Background: In April 2016, MOEWS chart was first introduced to all the obstetric wards in UMMC. Prior to this, all the obstetric wards in UMMC used the same monitoring chart as the other wards in the hospital. However, it does not have the scoring system to alert health personnel, nor does it have additional obstetric parameters such as proteinuria, amniotic fluid and lochia. This is not only useful for triage purposes, especially in a busy setting, but it has the potential to change a 'passive' work culture into a 'pro-active' work culture. **Aim:** To conduct an audit to assess the compliance and performance of MOEWS chart among the nurses and doctors and to identify weaknesses in the system that could be improved in order to achieve full compliance. **Standard:** We set 100% target for usage of MOEWS chart and also charting the four main vital signs, which were temperature, blood pressure, respiratory rate and heart rate at least every 12 hourly. To evaluate the performance of the chart, we looked into the response of any triggers and the appropriateness of the level of the responders which were set at 100% target. **Setting:** A debriefing was done in all the obstetric wards in UMMC included antenatal ward, postnatal ward, pregnancy assessment care ward, and labour room. **Methodology:** We conducted a full cycle audit in the obstetric wards, namely the antenatal ward, postnatal ward, pregnancy assessment care unit, labour ward and high dependency unit in UMMC for 6 months from May 2016 until end of October 2016. **Results:** At the end of audit cycle, we achieved 100% in all the criteria except charting the four main vital (respiratory rate, blood pressure, heart rate and temperature) signs at least 12 hourly which reached 91.5% from 73.3%. **Conclusion:** The audit has shown acceptance and acknowledgement from health staffs to utilize the MOEWS chart. Continuous training and audit for all health personnel need to be carried out regularly to ensure the MOEWS chart can be used to its fullest potential in reducing maternal morbidity and mortality.

The Provision of Preconception Care by Non-obstetrics and Gynaecology Medical Officers: An Assessment of Awareness, Knowledge and Attitude

Dr Fathi Laila Binti Amir, Prof Imelda Balchin (Consultant Fetomaternal Medicine)

Obstetrics and Gynaecology Department, University Malaya Medical Centre

ABSTRACT

Objectives: To assess awareness, knowledge, attitude and practice behaviour of non-gynaecological medical officers (MOs) in the provision of preconception care (PCC). **Methods:** Validated questionnaires were handed out to MOs from 10 departments from University Malaya Medical Centre (UMMC) and Kuala Lumpur Hospital (HKL). These were obtained by convenience sampling, and were self-administered by respondents. The sample size required was 260. **Results:** There were 337 respondents (178 UMMC and 159 HKL). Of these, 89 (26.4%) provided PCC. Female MOs were more likely to provide PCC than male MOs ($p < 0.05$). MOs from primary care department contributed the highest provision of PCC (83.8%, 95% CI 71.9-95.7). Next is clinical oncology 19% (70.8%, 95% CI 52.7-89.0) while Medical department (4.6%, 95% CI 1.6-10.7) is the second lowest. There is statistical significant difference between departments in provision of PCC ($p < 0.001$). MOs have decided that only Primary care doctors, O&G doctors and GPs should provide PCC. Most MOs (57.6%) did not agree that PCC is a high priority in the medical officers' workload. This is further supported by the next question where 48% of the MOs agree that they do not have enough time to provide PCC. About 34.5% of the MOs also feel that they are not the most suitable person to provide PCC. If hospital provide PCC the service MOs (108 out of 133, 81.2%, 95% CI 74.6-87.8) are willing to provide preconception care while only (126 out of 204, 61.8%, 95% CI 55.1-68.4) master students agreed to do so. There is statistically significant difference ($p < 0.05$). Only 134 (39.8%) asked whether or not patients were planning a pregnancy, and only 124 (36.8%) MOs asked about the use of contraception. The date of the last menstrual period was asked by only 194 (57.6%) MOs. **Conclusion:** There is a lack of awareness on the importance of preconception care amongst non-gynaecological medical officers. There is a general negative attitude and this is reflected in low provision of preconception advice seen amongst this group. Training is recommended to ensure that women of reproductive age with medical disorders are appropriately referred for PCC at the Primary Care Department.

A 10-year Review of Congenital Central Nervous System Malformations and Associated Anomalies in a University Hospital

Muhammad Shamin Bin Mohamed Yusof, Nur Halimanja Sabidin, Sofiah Sulaiman, Jamiyah Hassan

Dept of Obstetrics and Gynaecology, Faculty of Medicine, University Malaya

ABSTRACT

Objectives: To identify and evaluate the congenital central nervous system (CNS) malformations and its associated anomalies. To identify any existing risk factors. **Methods:** All confirmed cases of congenital cranial nerve system (CNS) anomalies from 2006-2015 from the database of the Ultrasound Unit in University Malaya Medical Centre were analysed. The medical records were obtained from the Medical Records Department. The demographic and pregnancy data were collected including antenatal and delivery data, age, race, history of smoking and co-morbid factors such as diabetes and pregnancy-induced hypertension (PIH). All the collected data were analyzed using SPSS version 21 and the study is using Pearson Chi-Square test (p-value). In all cases, p value < 0.05 was considered statistically significant. **Results:** There were 298 (27%) confirmed cases of CNS anomalies from 2006-2015 out of 1099 all congenital malformations. Statistical analysis shows the mean maternal group age is 30.84 with highest age of 45 and lowest age of 19. The population race in this study consist of 222 Malay (74.5%), 37 Chinese (12.4%), 28 Indian (9.4%) and 11 others (3.7%). There were 220 cases with single congenital CNS anomaly (73.8%) and 77 cases with multiple congenital CNS anomaly (25.8%). The types of diagnosis of the congenital CNS anomaly include 110 ventriculomegaly (28.1%), 45 anencephaly (11.5%), 9 fetal acrania (2.3%), 15 microcephaly (3.8%), 37 holoprosencephaly (9.4%), 36 cisterna magna anomalies (9.2%), 29 spina bifida (7.4%), 20 encephalocele (5.1%), 17 agenesis of corpus callosum (4.3%), 21 Dandy-Walker variant (5.4%), 6 posterior fossa cyst (1.5%), 15 choroid plexus cyst (3.8%), 2 arachnoid cyst (0.5%), 2 hydrocephalus (0.5%), 8 hypoplastic cerebellum (2.0%), and 17 others CNS anomaly (4.3%). **Conclusions:** Congenital cranial nervous system anomalies are one of the commonest congenital malformations and ultrasound is a useful tool for diagnosis.

A 10-year Review of Prenatal Diagnosis of Congenital Cardiac Anomalies in a University Hospital

Siti Nor Shafiqah Shaari, Sofiah Sulaiman, Jamiyah Hassan

Dept of Obstetrics and Gynaecology, Faculty of Medicine, UM

ABSTRACT

Aim: To identify the prevalence of congenital cardiac anomalies in pregnant women. To identify maternal risk factors associated with congenital cardiac anomalies. **Method:** All confirmed cases of congenital cardiac anomalies from 2006-2015 from the database of the Ultrasound Unit in University Malaya Medical Centre were analysed. The medical records were obtained from the Medical Records Department. The demographic and pregnancy data were collected including antenatal and delivery data, age, race, history of smoking and co-morbid factors such as diabetes, pregnancy-induced hypertension (PIH), epilepsy, SLE and other connective tissue diseases. During this period there were 1,099 total congenital anomalies of which 306 were congenital cardiac anomalies. The collected data were analyzed by using SPSS version 21. Pearson Chi-Square test was used during the analysis and p value < 0.05 is considered statistically significant. **Result:** The age of the mothers ranged from less than 19 years old (0.3%), 20-29 years old (43.7%), 30-39 years old (45.7%) and more than 40 years old (10.3%). The mean maternal age is 31 years old. The ethnic groups were Malay (68.42%), Chinese (21.05%), Indian (6.908%) and others (3.618%). 181 (59.2%) mothers did not have any history of abortion, 82 (26.7%) mothers have history of abortion. The highest number of abortion is 5 and the lowest number is 1. 86.9% of the mothers do not smoke, 127 (41.5%) mothers do not have any co-morbidities and 75 (24.5%) had co-morbidities. Among the co-morbidities 27 had gestational diabetes mellitus (12.2%), 10 bronchial asthma (4.5%), 9 pregnancy induced hypertension (4.1%), 6 pre-eclampsia (2.7%), 4 hypothyroidism (1.8%), 4 hypertension (1.8%), 3 connective tissue disease (1.4%), 2 diabetes mellitus (0.9%), 2 depression disorder (0.9%) and 28 other diseases (12.6%). The outcome of the study shows that 256 fetus (83.7%) has one anomaly, 47 fetus (15.4%) has multiple anomalies and 3 (1%) is missing data. Birth outcome of the fetus include 27 intrauterine death (8.8%), 107 live birth (35%), 25 perinatal death (8.2%) and 147 (48%) delivered elsewhere. There were significant relationships between history of smoking and co-morbidities with the prevalence of congenital cardiac anomalies. **Conclusions:** Congenital cardiac anomalies are fairly common and have a relationship with maternal co-morbidities.

Use of Cerebroplacental Ratio in Management of High Risk Pregnancies

J Sivanathan, H Omar

Obstetrics and Gynaecology Department, Hospital Shah Alam

ABSTRACT

Objectives: Cerebroplacental ratio (CPR) is emerging as an important predictor of adverse pregnancy outcome. This assessment tool is not routinely used and is mainly performed by fetomaternal specialists. In the management of high risk pregnancies, decision for delivery is compounded by maternal and foetal indications. At times, adverse perinatal outcomes such as stillbirth occur despite close monitoring of the pregnancy. In order to avoid such incidents, iatrogenic premature delivery is carried out. This may result in untoward morbidity due to prematurity, and occasionally mortality. The application of the CPR tool can assist in predicting foetal well-being in terms of hypoxia and cerebral redistribution aiding in decision to deliver. **Methods:** For the past 6 months, our unit has applied the CPR in the management of high risk pregnancies. Cases such as severe preeclampsia, insulin dependent diabetes mellitus, intrauterine growth restriction, oligohydramnios and reduced foetal movements were subjected to Doppler assessments of the umbilical artery, middle cerebral artery, ductus venosus, umbilical vein and uterine artery. Only 1 clinician was involved in the usage of this tool. A CPR calculator which is available online was utilised (Fetal Medicine Barcelona). **Results:** Usage of the CPR enabled prolongation of gestation of these high risk pregnancies by a few weeks, which would likely have been subjected to earlier delivery by the general obstetricians. Examples of cases managed will be presented. As this is a secondary hospital, high risk cases are not as many as in a tertiary centre. **Conclusion:** The CPR is a useful tool in managing high risk pregnancies. It helps prevent inadvertent premature deliveries, thereby reducing adverse neonatal outcomes.

Blood Loss in Caesarean Section in Hospital Universiti Sains Malaysia (HUSM): Estimation by Surgeons and Anaethetists in comparison with Quantitative Measurement and Blood Parameters Assessments

Dr Nazhan Afeef Mohd. Ariff, Assoc Prof Dr Saedah Ali, Dr Laila Ab Mukmin

Department of Anaesthesiology and Intensive Care, Universiti Sains Malaysia, 16150 Kubang Kerian, Kelantan, Malaysia

ABSTRACT

Background: We compared the visual estimation of blood loss for Caesarean section (CS) by surgeons and anaesthetists and their accuracy with relation to years of experience against quantitative measurement. Haemoglobin (Hb) trend after CS were studied. **Methods:** 134 patients who underwent CS were included. Visual estimations were collected from surgeons and anaesthetists. The blood volume in collection bottle and disposable items were quantified. Hb levels pre-CS followed by 1 hour and 24 hours post CS were taken. Data were tested by Reliability Testing, Independent T-Test, Pearson's Correlation and Multiple Linear Regressions where $P < 0.05$ in considered significant. **Results:** There were strong correlations between surgeons' and anaesthetists' estimation of blood loss and quantitative measurement with Intraclass Correlation Coefficient of $r = 0.828$ and $r = 0.805$, $P < 0.001$. Surgeons' accuracy in estimating blood loss has no significant difference in less and equal to 5 experience years against more than 6 experience years group, $P = 0.053$. Anaesthetists' accuracy in estimating blood loss has significant difference in less and equal to 5 experience years against more than 6 experience years group, $P = 0.038$. There was moderate negative correlation in between percentage blood loss and Delta Hb 1 hour post CS, $P < 0.001$. Percentage blood loss, intraoperative fluid administration and patient previous scars were strong predictors for Delta Hb 1 hour post CS with $P < 0.05$. **Conclusions:** Estimation blood loss for CS by surgeons and anaesthetists in HUSM correlates with quantitative measurement. Drop in Hb post CS correlates with percentage blood loss. Prediction of Delta Hb 1 hour and 24 hours post CS can be a useful tool in helping doctors in managing patient.

KEY WORDS:

Caesarean section, surgeons' estimation, anaesthetists' estimation, Delta Hb post 1 hour CS, Percentage blood loss

Endometriosis Scoring Index: A New and Validated Diagnostic Tool

Lou Wei Ying, Adibah Ibrahim, Wan Mohamad Zahiruddin Wan Mohd

School of Medical Sciences, Universiti Sains Malaysia

ABSTRACT

Objectives: To formulate and evaluate the reliability of non-invasive diagnostic scoring system to diagnose endometriosis. **Design:** Controlled clinical study. **Setting:** Patients attending the Gynaecology and Infertility Clinic of Hospital USM. **Patient(s):** Reproductive aged patients with chronic pelvic pain subjected for diagnostic laparoscopic surgery were selected. **Intervention(s):** Diagnostic laparoscopic surgery was performed. The presence and stage of endometriosis was determined and tissue biopsy at suspected area of endometriosis was taken. Formation and evaluation of a scoring system was done. **Main Outcome Measure(s):** Histology confirmation of endometriosis and endometriosis scoring index. **Result(s):** The presence of severe dysmenorrhea, level of serum Ca125 between 50-200 u/ml and the presence of multiloculated ovarian cyst with thick sedimentation were noted to be significantly associated with endometriosis. Subsequently, a scoring index to assess the likelihood of endometriosis was formulated. It is shown that this scoring index, named as CliEndomet, is reliable to detect endometriosis (sensitivity of 0.696, specificity 0.711, PPV=0.78 and NPV=0.614, Kappa coefficient=0.39 at 95% CI, 0.21-0.58; p value \leq 0.05). It is more capable to detect advanced stage disease than early stage (sensitivity=0.96 versus sensitivity 0.42, 95% CI). **Conclusion(s):** CliEndomet scoring system can reliably be used as a diagnostic tool to diagnose endometriosis for patients who refuse to undergo surgical diagnosis and intervention.

GY 02

Intra-Operative Frozen Section in Ovarian Tumours – Hospital Sultanah Bahiyah’s Experience

Nur Zaiti MA¹, Ng BK¹, Noorasmaliza MP², Zaleha AM¹, Rushdan MN³

¹Department of Obstetrics and Gynaecology, UKM Medical Centre, ²Department of Pathology, Hospital Sultanah Bahiyah, ³Department of Obstetrics and Gynaecology, Hospital Sultanah Bahiyah

ABSTRACT

Background: The accuracy of intra-operative frozen section is very important in the evaluation of ovarian tumours so that appropriate surgical procedure can be selected. **Study Objective:** To assess the sensitivity, specificity, positive predictive value and negative predictive value of intra-operative frozen section as compared to final histopathological result in ovarian tumours. **Materials and Methods:** All patients underwent intra-operative frozen section for ovarian masses in Hospital Sultanah Bahiyah over 9 years duration from June 2008 till April 2017 were reviewed. Frozen section diagnosis and final histopathological reports were compared. **Results:** A total of 94 cases were recruited for final evaluation. The frozen section diagnosis was comparable with the final histopathological reports in 85% of cases. The sensitivity, specificity, positive predictive value and negative predictive value for benign and malignant ovarian tumours were 95.7%, 88.9%, 90%, 95.2% and 75%, 99%, 90% and 91.8% respectively. Whereas, for borderline ovarian tumours, the sensitivity and specificity was 81 and 90% respectively; positive predictive value was 70.8% and negative predictive value was 94.1%. **Conclusion:** The accuracy of intra-operative frozen for ovarian tumours is high and it remained a reliable option in assessing ovarian masses intra-operatively.

46 XY Females with Male Karyotype: A Case Series in Malaysia

Ani Amelia Zainuddin, Chong Hong Soon, Nurul Iftida Basri, Ana Vetrina, Anizah Ali, Nur Azurah Abd Ghani

Paediatric Adolescent Gynaecology Unit, Department of Obstetrics and Gynaecology, UKM Medical Centre, Malaysia

ABSTRACT

Objectives: To compare the cases of phenotypic female patients that presented with male karyotype and the histopathological examination (HPE) results of their gonads. **Methods:** A retrospective review of five cases of 46 XY female patients that were managed by the Paediatric and Adolescent Gynaecology (PAG) unit, Department of Obstetrics and Gynaecology of UKM Medical Centre from 2009 to 2017, were conducted. **Results:** These patients, with female phenotypes, presented in adolescence or early adulthood with primary amenorrhoea with varying degrees of puberty. One was tall with breast development, another was very short with multiple co-morbidities, one had clitoromegaly and the other three had no secondary sexual characteristics. They were examined and had karyotyping and hormonal profiles done with ultrasound and MRI. Gonadectomies were performed once their 46 XY karyotype were confirmed. Histopathological examinations of their gonads were performed and the results varied from dysgenetic gonads to having testicular tissue to malignancy. All five had female gender identities and were given hormonal treatments and were counselled on fertility. One had a clitoroplasty performed. **Conclusion:** Female patients with 46 XY karyotypes require gonadectomies done at different timings depending on their diagnoses and gender identities. Risk of malignancy of their gonads need to be ascertained. Pubertal induction need to be managed. Issues such as fertility and gender identity need to be addressed. The managing team need to be sensitive in managing these rare cases as the diagnoses can be psychologically devastating.

KEY WORDS:

46 XY Female, Disorder of Sexual Development (DSD), Gonadal Dysgenesis, Swyer Syndrome, Androgen Insensitivity Syndrome, mixed gonadal dysgenesis, delayed puberty, paediatric and adolescent gynaecology

Ultrasonography and Clinical Outcomes following Surgical Anti-Incontinence Procedures (Monarc vs Miniarc): 5-year Review

Yiap Loong Tan, MD, MRCOG^a, Tsia-Shu Lo, MD¹, Leng Boi Pue, MD, MRCOG, MOGA³, Uy-Patrimonio, Ma.Clarrisa MD

¹Division of Urogynecology, Department of Obstetrics and Gynecology, Chang Gung Memorial Hospital, Chang Gung University, School of Medicine, Taoyuan, Taiwan, Republic of China, ²Department of Obstetrics & Gynecology, Kuching Specialist Hospital, KPJ Healthcare, Kuching, Sarawak, Malaysia, ³Department of Obstetrics & Gynecology, Subang Jaya Medical Center, Ramsay Sime Darby Health Care, Selangor, Malaysia

ABSTRACT

Objective: To evaluate the ultrasound morphology and its clinical outcome among women who had undergone MiniarcTM vs MonarcTM in the treatment of stress urinary incontinence (SUI), 5-year review. **Study Design:** This is a 5-year review study from a previous reported prospective study on 147 patients with USI and undergone either Miniarc or Monarc surgery. From March 2010 to December 2011, patients with clinically SUI and urodynamic stress incontinence (USI) were studied. Objective cure of SUI was defined as no urinary leakage on provocative filling cystometry and 1-hour pad test of <2 g. Subjective cure of SUI was the negative response to UDI-6. Introital ultrasound at 3-years explored the sling and bladder neck's position, mobility, sling tension, percentile of urethra where the sling was located and urethral kinking. **Results:** Postoperative data was available from 138 women. The ultrasound objective data for successful treatment post-operative follow-up was available from 123 women (51 Monarc, 72 Miniarc) at 3rd year, the rest failed to follow-up. A bladder perforation was diagnosed in the Monarc group and no exposure noted in both groups. At 3rd year, rest and during Valsalva, analogous distances of the bladder neck and sling as well as TU (distance between the mid position of the sling and center of urethral core) were similar for both procedures. In both groups, US (urethral shortest diameter) and UI (urethral longest diameter) were comparable at Valsalva that was significantly shorter and longer respectively compared to the values at rest. Both slings demonstrated caudally shift in the x-axis and y-axis. Miniarc position shifted more caudally on the x-axis (xt) at rest with concomitant more caudally shift on the y-axis on straining than Monarc. Percentage of urethral kinking remained similar. Failure rate increased with Miniarc but statistical analysis failed to detect any significant difference between the 2 groups with regards to the objective and subjective cure (Miniarc 87.8% and 82.9% vs Monarc 91.1% and 89.3%; p>0.05). **Conclusions:** In conclusion, Miniarc and Monarc maintained comparable subjective and objective clinical outcomes at 3-years minimum follow-up. Ultrasonography evaluation revealed more shift in the position of Miniarc caudally on x-axis at rest and y-axis during straining compared to Monarc. Majority of urethral impingement was still noted in the Miniarc group with concurrent higher MUCP (maximum urethral closure pressure). The differing shift may be related to sling anchoring mechanism.

KEY WORDS:

Anti-incontinence surgery, mid-urethral slings, outcomes, single incision sling, ultrasonography

Comparison of Outcome between Office Hysteroscopy and Conventional Hysteroscopy in Women with Abnormal Uterine Bleeding at Hospital Canselor Tuanku Muhriz

Dr Noor Azimah Binti Zakaria, Dr Yulianty Arifuddin, Associate Prof Dr Shuhaila Binti Ahmad

Department Of O&G, Hospital Canselor Tuanku Muhriz, PPUKM

ABSTRACT

Background: Office hysteroscopy is not widely accepted compared to conventional hysteroscopy among women in Hospital Canselor Tuanku Muhriz due to perception of pain without general or regional anaesthesia. This randomized controlled trial was performed to evaluate success rate, level of pain score, endometrial sampling and complications of both procedures. **Study Objective:** To assess the success in achieving diagnosis for women with abnormal uterine bleeding by office hysteroscopy versus conventional hysteroscopy. To compare the pain score, safety and adverse events during both procedures. **Materials and Methods:** A randomized controlled trial in which all participants that fulfilled the inclusion criteria were recruited. The study was conducted in Hospital Canselor Tuanku Muhriz from December 2015 until May 2016. A total of 80 women were recruited. Patients were randomly assigned to receive either office hysteroscopy or conventional hysteroscopy using Excel Micro software in gynaecology clinic or ward. All data were recorded in an electronic database and analysed using SPSS Version 23.0. Descriptive statistics were used to summarize the characteristics of the study population. The qualitative variables were expressed as frequencies and the quantitative variables were expressed as means in standard deviations. Statistical significance was calculated using the Chi square test when comparing qualitative data and the student t test for comparing quantitative data. P value of less than 0.05 was taken as significant. **Results:** During the study period, 80 patients underwent hysteroscopy for abnormal uterine bleeding (AUB). The procedure was performed successfully in 97.5% women without serious complication. Biopsy was taken in 97.5% of patients underwent office hysteroscopy while only 85% in the conventional hysteroscopy. Satisfactory endometrial sampling and tissue biopsy were higher in the office hysteroscopy group (80%) compared to the conventional group (67.5%) but this was not statistically significant (p value=0.204). In the office hysteroscopy group, 17.5% experienced unbearable pain and 5% of patients developed transient vasovagal attack. There were 52.5% of women who had mild pain (score 1-4) and were reassured. 37.5% had moderate pain whereas only 10% had severe pain. At most, 35% patients required analgesia post procedure. All patients remained haemodynamically stable during and after the procedure. **Conclusion:** Office hysteroscopy is an excellent outpatient minimally invasive operative procedure which offers exceptional patient's compliance with low failure and complication rates.

The Impact of Non-cavity Distorting Intramural Fibroids on IVF Outcomes: A systematic Review and Meta-analysis

Nuzaim MNM, Mukhri B Hamdan, Siti Zawiah Binti Omar

Department of Obstetrics and Gynaecology, Faculty of Medicine, University of Malaya

ABSTRACT

Background: Uterine fibroids (UF) including those with non-cavity distorting variant can cause infertility. When these women require IVF treatment, controversies whether its presence will negatively impact on their IVF outcomes has been debated. The heterogenous nature of UF has given inconsistent results in many published studies. Besides that, available meta-analysis on this subject is dated and has significant heterogeneity. Moreover, IVF techniques and protocols have also rapidly evolved since the last review. An updated review and Meta-Analysis is needed to give informed choice to patient and IVF practitioner. **Objective:** To review and meta-analyse available data from controlled studies. **Methods:** We performed a systematic review and meta-analysis on extracted data according to PRISMA. Relevant articles were selected from literature search that was carried out using Medline, Embase, and Web of science. Both randomised and non-randomised controlled studies were included. Our primary outcome is live birth rate (LBR) and secondary outcomes are clinical pregnancy rate (CPR), implantation rate (IR) and miscarriage rate (MR). Qualities of included studies were scored using Newcastle-Ottawa Quality Assessment Scales and meta-analysis conducted by using RevMan 5.3. **Results:** We found 2,482 articles but included only 26 articles, which were non-randomised studies, based on inclusion and exclusion criteria, with total of 8,340 IVF cycles. Fourteen (n=14/26) studies included intramural fibroids (IM) with subserosal fibroids (SS) and only 12 (n=12/26) reported IM alone. We found that, compared to women with no fibroid, non-cavity distorting IM with or without SS has lower CPR (RR= 0.83, 95% CI=0.77-0.89, P< 0.000, I2=42%, 7,685 cycles, 24 studies), LBR (RR=0.80, 95% CI=0.73-0.87, P< 0.000, I2=40%, 5,453 cycles, 16 studies) and higher MR (RR=1.26, 95% CI=1.06-1.50, P=0.009, I2=21%, 2,623 cycles, 15 studies). Whereas, IR (RR=0.9, 95% CI=0.81-1.01, P= 0.07, I2=33%, 6,845 cycles, 10 studies) is similar. Subgroup analysis exclusive on non-cavity distorting IM, showed lower CPR (RR=0.84, 95% CI=0.77-0.92, P< 0.000, I2=18%, 4,336 cycles, 12 studies), LBR (RR=0.83, 95% CI=0.73-0.94, P=0.005, I2=32%, 2,171 cycles, 6 studies) and higher MR (RR=1.42, 95% CI=1.04-1.94, P=0.03, I2=0%, 1,524 cycles, 9 studies) However, IR (RR=0.71, 95% CI=0.49-1.02, P= 0.07, I2=81%, 1,511 cycles, 5 studies) is similar. **Conclusion:** Presence of non-cavity distorting IM with or without SS will reduce LBR, CPR, and increase MR without affecting IR. Although, this is the largest and most updated systematic review and meta-analysis, the result still has significant heterogeneity and needs careful interpretation.

Is Hyacinth Exercises Better than Conventional Pelvic Floor Exercise (PFE) among Women Aged above 55 Years with Urinary Incontinence (UI)?

Dr Chua Shiao Chuan, Prof Khong Su Yen

University Malaya Medical Centre

ABSTRACT

Background: Women living with UI have been shown to have a significantly lower quality of life compared with those who are continent (TOG 2009). In Malaysia, the estimated prevalence of UI in the elderly population was found to be about 10% with this figure increasing up to 50% amongst residents living in nursing homes (Poi 1995, Sidik 2010). PFE remains the main primary intervention for the management of stress and mixed UI (NICE guideline, November 2015). **Objectives:** To determine whether Hyacinth exercises (Alternative Slow and Moderate Exercises) was more effective than conventional PFE alone for the treatment of female with UI. **Methods:** This was a prospective, randomized, single-blind study performed at University Malaya Medical Centre from July 2015 to May 2017 with ethics approval. Women aged 55 years and above with complaints of UI were recruited once they were counselled with written consents obtained. Women were randomized to either PFE alone or Hyacinth exercises which were taught by a trained physiotherapist. All patients were asked to complete an exercise diary. Primary outcome was evaluated via a validated questionnaire (Australian pelvic floor questionnaire) which was completed at recruitment, 2 and 6 months after enrolment. Secondary outcome was assessed by measuring pelvic floor strength with the use of Femiscan, an intravaginal biofeedback device. **Results:** Seventy-five women were recruited into this study which included ten drop outs. Both groups showed significant improvement in both questionnaire scores and Femiscan measurements from baseline to follow up visits. Mean score of improvement is higher in the Hyacinth group when compared to the PFE group at second (2.97 vs 1.65) and third visit (6.00 vs 5.26). However, this was not statistically different with p values of 0.27 and 0.56 respectively. Mean improvement of pelvic floor strength by Femiscan measurement was higher in the Hyacinth group when compared to the PFE group at second visit (39.27 vs 36.76), as well as at third visit (117.52 vs 81.47). Again, however, this was not statistically different with p values of 0.61 and 0.50 respectively. When comparing stress incontinence alone, there was significant score improvement in Hyacinth group when compared to PFE group (P= 0.06 vs 0.13) at second visit. **Conclusions:** Although there is no statistical difference between the two groups for our primary and secondary outcome, this study shows that Hyacinth group demonstrates earlier improvement in urinary stress incontinence at two months when compared to PFE group.

Preliminary Study on the Representativeness of Sentinel Node Mapping using Methylene Blue Dye in Endometrial and Cervical Cancer in Gynaecological Oncology Unit, Hospital Tengku Ampuan Afzan, Kuantan

Ong N, MRCOG, Zakaria AR, M.ObGyn, Mat-Ali N, M.Med (O&G)

Gynaecological Oncology Unit, Department of Obstetrics and Gynaecology, Hospital Tengku Ampuan Afzan, Kuantan

ABSTRACT

Introduction: The utilization of sentinel lymph node (SLN) mapping technique in the management of vulval cancer is established. However, the usage of SLN mapping in the management of endometrial and cervical cancer has not yet achieved widespread acceptance. Incorporation of SLN in the management of endometrial and cervical cancer may omit the need for extensive lymphadenectomy. **Objective:** The purpose of this preliminary study is to evaluate the representativeness of SLN identified using Methylene blue dye and identification of adverse reaction from this procedure. **Materials and Methods:** All patients who have either cervical or endometrial carcinoma were recruited. They were counselled for intra-operative SLN mapping procedure. The surgical procedure was carried out in the usual manner. The SLN were identified and removed prior to completing the lymphadenectomy. The full histology of the sentinel lymph nodes was then compared with the full histology of the remaining lymph nodes removed during the systematic lymphadenectomy. **Results:** There were a total of 14 patients recruited in this preliminary study. Out of which 64.3% and 35.7% had endometrial and cervical carcinoma respectively. Our SLN identification rate is 100% in this preliminary study. The median number of SLN identified were two on each group of pelvic nodes i.e. the left and the right pelvic lymph nodes. In this study, the positive predictive value (PPV) and the negative predictive value (NPV) of the SLN is 100%. There was no adverse reaction identified in all the patients during the SLN mapping procedure except the blue discolouration of urine post-procedural. **Conclusion:** In this preliminary study, we have shown that, the sentinel nodes identified using Methylene blue dye are representatives of the remaining lymph nodes removed during systematic lymphadenectomy. Further study need to be carried out before this approach can be incorporated into the management of endometrial and cervical cancer.

Predictive Scoring for Clomiphene Citrate Response based on Patients' Physical and Hormonal Profile

Muhammad Nauman Tariq¹, Hajra Shakil¹, Muhammad Maaz¹, Prof Dr Shagufta Saeed Sial²

¹4th Year MBBS, Rawalpindi Medical College, ²Head of Department, Department of Gynaecology, Benazir Bhutto Hospital, Rawalpindi, Pakistan

ABSTRACT

Background and Objectives: Clomiphene citrate is the first line drug for ovulation induction in WHO Group II subfertile women (normoestrogenic, normogonadotropic). **Objectives:** To compare the physical and hormonal profile of responders and non-responders. To formulate and assess a predictive score for clomiphene citrate (CC) response. **Materials and Methods:** This comparative analytical study was done in the Gynaecology Department, Benazir Bhutto Hospital, Rawalpindi. WHO Group II subfertile women who underwent CC therapy, from January 2016 to January 2017, were selected into two groups; Responders; 30 patients who ovulated and Non-responders; 30 patients who remained anovulatory. Patients with tubal and uterine subfertility were excluded. Menstrual history, BMI, hirsutism and Thyroid Stimulating Hormone (TSH) levels of the patients were studied. Descriptive statistics were calculated using SPSS version 21. Mann Whitney U Test, Independent Sample t Test and Chi Square Test were applied to assess the significance of variables. **Results:** Among Responders, mean BMI was low (23.27 ± 2.46) with 80% patients having normal BMI (≤ 24.9). All responders had TSH levels within the normal range. 93.3% of the responders had regular and 6.7% had irregular menstrual cycles. Hirsutism was present in 16.7% patients. Among Non-Responders, mean BMI was high (27.57 ± 3.39), where only 10% had normal BMI (≤ 24.9) while; 63.3% were overweight (BMI 25-29.9) and 26.7% obese (BMI ≥ 30). In this group 43.3% patients had abnormal TSH levels. Similarly, 70% patients had regular and 30% had irregular menstrual cycles. All studied variables were statistically significant between the two groups ($p < 0.05$). A predictive score for CC response was formulated considering these variables. Score 0 was given for all normal variables that is BMI ≤ 24.9 , TSH = 0.4-4.2 $\mu\text{U/ml}$, absence of hirsutism and regular menstrual cycle each. As these parameters became abnormal score 1 or 2 (only for overweight women) was given. Scoring ranged from 0-5. According to the predictive score, all responders had a score from 0 to 2 while 70% of non-responders had a score of 2 and above ($p < 0.05$). **Conclusion:** According to the predictive score, greater the score, lesser the chances to ovulate on CC therapy. Response prior to therapy can be predicted, enabling the doctors to intervene in patient's physical and hormonal factors responsible for decreased response, hence modifying the treatment modalities for ovulation induction.

KEY WORDS:

Clomiphene, Ovulation, Hirsutism, Scoring

Non-Hodgkin's Lymphoma of the Cervix: The Unexpected and Unusual Presentation

Khaw SX, Westmead Hospital, Fairfield Hospital

Ngo H, Fairfield Hospital

ABSTRACT

Background/Introduction: Female genital tract lymphoma is an extremely rare diagnosis accounting for only 1.5% of extra nodal non-Hodgkin's lymphoma and a meagre less than 0.5% of gynaecological cancer. Primary lymphoma of cervix is considered less common compared to cervical involvement in a multi organ disease³. Majority of these rare cases are diagnosed during routine screening on Papanicolaou (Pap) cytology smear. Due to the limited number of primary lymphoma of the cervix, a standard regime has not been developed⁵. This is a case report of a 73-year-old non-English speaking background lady who presented to her obstetrician with one month history of post-menopausal bleeding per vaginum. Histology revealed a high grade large B cell non-Hodgkin's lymphoma with a high proliferative index, expressing C-MYC protein in a high proportion of cells and CD10 and LCA positive on a cervical biopsy. **Objectives:** This poster presents the rarity of cervical lymphoma; including its incidence, clinical presentation and diagnostic dilemma from benign conditions as well as treatment regime. Methods (including type of data collected): Case report and literature search/review on Pubmed/MEDLINE. Comparing both in terms of presentation, diagnosis and treatment management. **Results:** Patient has been diagnosed in a timely manner and appropriately managed as well as treated. **Conclusions:** This presentation of cervical diffuse large B cell non-Hodgkin's lymphoma highlights the importance of having an absolute open mind when working up patients presenting with common symptoms in gynaecology like bleeding per vaginum and understanding the different management approaches for these rare conditions.

Extrauterine Migration of a MIRENA® Intrauterine Device: Case Reports comparing Two Different Presentations

Khaw SX, Westmead Hospital NSW Australia

ABSTRACT

The extrauterine migration of an intrauterine device (IUD) is a known complication, either as a result of IUD expulsion or uterine perforation. Patients may present very differently; with signs of perforation or infection and have a very tender pelvic on abdominal examination or they may have a more subtle presentation and have only very mild tenderness on examination. **Objective:** This case report describes two different presentations of extrauterine migration of IUD due to probable perforation. **Case Report:** This is a case report of two uncommon but potentially dangerous outcomes of IUD placement and use. One case was an incidental finding at time of removal and the other case presents with lower abdominal pain. Both had subtle presentation of a potentially life-threatening diagnosis. **Conclusion:** This article presents the two cases, discusses the incidence, likely causes, predisposing factors, diagnostic modalities and the treatment of this diagnosis.

The Outcome of Transpelvic Magnetic Stimulation (TPMS) in treating Women with Urinary Incontinence and Overactive Bladder – A Prospective Observational Study

Zalina Nusee¹, Rozihan Ismail³, Nazura Karim^{2,3}, Razman Mohd Rus⁴

¹Department of Obstetrics & Gynecology, International Islamic University Malaysia, ²Department of Obstetrics & Gynecology, Hospital Tuanku Ja'afar, Seremban, ³Department of Obstetrics & Gynecology, Hospital T. A. Afzan, Kuantan, Pahang, ⁴Department of Community Medicine, International Islamic University Malaysia

ABSTRACT

Introduction: Pelvic floor muscle therapy (PFMT) is the simplest and the most effective treatment provided that it is done properly. Generally, women should be motivated to continue doing this exercise. Women who are not able to contract their pelvic floor muscles effectively, Transpelvic Magnetic Stimulation Therapy (TPMS) is a useful new treatment modality. **Objectives:** To determine the outcome of TPMS therapy as conservative management in the treatment of female Urinary Incontinence (UI), mixed incontinence and Over Active Bladder (OAB). **Methods:** This is a pilot study on 53 women who attended the Urogynaecology clinic diagnosed with UI and OAB. They received 10 courses of individualized PFMT using TPMS chair over 5 weeks duration which consist of 8 second pulses followed by 4 second rest for a total of 20 minutes. They were assessed prior to recruitment, at 5 weeks and 6 months after treatment. Assessments include cough stress test, bladder diary, 1-hour pad test, perineometry and validated questionnaires (UDI 6 or V-8 OAB). The outcome measures include objective cure of UI by negative pad test, changes in muscle power, reduction in numbers of leaking episodes, daytime frequency and nocturia, negative cough stress test and improvement in specific quality of life questionnaires (QOL). The analysis was based on intention to treat using SPSS software. **Results:** There were total of 53 women recruited in the study. Only 43 of them completed treatment protocol. Table 1 showed patient's clinical characteristic. At 6 weeks of treatment, all participants with SUI group improved in their severity index followed by OAB group (75%) and mixed incontinence group (55.6%). However, the percentage dropped 6 months later which was 12.5%, 50% and 44.4% respectively. These were further supported by improved perineal muscles power in SUI and OAB groups at 6 weeks of treatment but deteriorated 6 months later (table 2). Similar findings were seen in the 1-hour pad test and QOL score (table 3). OAB and MIXED groups showed more positive and sustainable outcome of QOL (V8 and UDI 6) compared to SUI. **Conclusion:** TPMS is an effective type of PFMT for UI and OAB. Further study with bigger sample size, longer duration of maintenance therapy is required to see the sustainable effect of the treatment.

Urethral Prolapse: An unusual cause of Prepubertal Vaginal Bleeding: A Case Report

Lavitha Sivapatham, Munirah Arif Kor, Siti Sarah Idris, Siti Nurliana Osman, Muralitharan Ganesalingam

Department of Obstetrics and Gynaecology, Ampang Hospital, Selangor, Malaysia

ABSTRACT

History: A 6 ½ year old girl of Chinese parentage presented to the emergency department with a 3-day history of “per-vaginal” bleeding. She was previously well, being born at term and having had normal developmental milestones. She had no pain or itchiness. There was no dysuria, haematuria, incontinence, abdominal pain, fever or constipation. She had no constitutional symptoms. Bowel and urinary habits were normal. She denied any foul play or insertion of any foreign objects. She was in primary one, when she was not in school she was taken care of fully by her mother. **Physical Examination:** She was prepubertal with no secondary sexual characteristics. There was no abdominal or pelvic mass palpable. There was a doughnut shaped mass was seen at the introitus. There was no active bleeding seen. Pelvic ultrasound was normal. It was unclear where the mass was coming from and she had an examination done under anaesthesia. The doughnut shaped mass seen at the urethra. There was blood staining on her underwear but there was no active bleeding. The vagina was seen and it was normal. There were no obvious signs of trauma. **Management:** The diagnosis of urethral prolapse was made. She was started on topical oestrogen cream to be applied on the mass. She was also advised to use a salt bath daily for 10 minutes. She was seen again two weeks and 5 weeks later, at the Paediatric and Adolescent Gynaecology Clinic. She had no more bleeding and the mass had reduced significantly and almost disappeared. **Discussion:** Urethral prolapse is an uncommon cause for prepubertal “vaginal bleeding”. It has been reported to occur mainly in girls of African origin. It commonly occurs in prepubertal girls aged between 4 and 7. The mucosa of the urethra everts through the urethral opening and becomes oedematous and friable. The commonest symptom is “vaginal” bleeding. There are usually no urinary symptoms or pain. Management is usually conservative as in this case and usually resolves after 4-6 weeks. Surgical excision of the urethral mucosa has been described in cases where conservative management failed.

Caesarean Scar Pregnancy: A Case Report and Key Diagnostic Features of Emerging Caesarean Section Complication

Fathi Ramly¹, Norhana², Sundar Gugan SD², Norashikin Abdul Fuad²

¹Obstetrics & Gynaecology, Medical Faculty, MARA University of Technology, Malaysia, ²Obstetrics & Gynaecology, Sungai Buloh Hospital, Selangor, Malaysia

ABSTRACT

Caesarean scar pregnancy is a rare consequence following caesarean section. Its incidence is increasing in lieu with numbers of caesarean section. In Malaysia, caesarean section rate increased from 15% in 1985 to 23.08% in 2014. Thus, it poses diagnostic and therapeutic dilemma due to its rare but emerging problem. **Case:** We report a case of caesarean scar pregnancy diagnosed in the first trimester. She was 33 years old woman, G5P4 at 8 weeks + 5 days, with one previous uncomplicated caesarean section, was referred from General Practitioner with an episode of per vagina bleeding. She was haemodynamically stable and assessment by transvaginal ultrasound showed features of viable Scar Ectopic Pregnancy. She was scheduled for diagnostic laparoscopy converted to laparotomy and successfully treated by resection of scar ectopic. **Discussion:** Diagnostic and treatment approach are being described in few case series and reports. RCOG has outlined ultrasonographic criteria, diagnostic modality and treatment options in managing this case. Transvagina ultrasound becomes gold standard with recognition of certain features while MRI or diagnostic laparoscopy provides an adjunct in reaching the diagnosis. Medical and surgical treatment has been described but surgical approach is the most effective. **Conclusion:** It is imperative to have high index of suspicion of possible caesarean scar pregnancy in those with previous history of caesarean section. Vigilant in interpreting findings of ultrasound, early diagnosis and immediate appropriate treatment is empirical in preventing further catastrophic damage.

KEY WORDS:

Scar ectopic pregnancy, caesarean scar pregnancy, ultrasound

Knowledge of Cervical Cancer Prevention among Vaccinated Female University Students in the Era of Human Papillomavirus (HPV) Vaccination: What have we Achieved in Malaysia?

Chew Kah Teik, Yulianty Arifuddin, Ng Beng Kwang, Muhamad Razif Mohd Razali, Chan Fong Sing, Nur Syahirah Aznan, Noor Amalina Suahni, Siti Intan Atikah Ahamad Tajuddin, Mohamad Nasir Shafie

Department of Obstetrics and Gynaecology, Universiti Kebangsaan Malaysia Medical Center

ABSTRACT

Background and Aims: HPV vaccine was introduced in 2010 as a part of the national vaccination programme in Malaysia. This study aimed to assess the perception and knowledge of cervical cancer prevention among fully vaccinated female university students in the era of HPV vaccination. **Materials and Methods:** A total of 384 fully vaccinated female students were recruited and had a face to face interview with a set of standard questionnaires to evaluate their perception and knowledge towards cervix cancer prevention. The total knowledge score was 18 and was categorized into poor (score ≤ 5), moderate (score 6-10) and good (score ≥ 11). **Results:** Mean score for knowledge of cervical cancer prevention was 8.24/18 (SD \pm 3.85), with 170 students (44.3%) scoring moderate knowledge level. Students' perceived seriousness and susceptibility of HPV infection, and perceived benefit of HPV vaccination correlated well with knowledge of cervical cancer prevention. The main source of information was schools, followed by internet. As they had been vaccinated, two main reasons for their acceptance were self-health consciousness and free of charge of the vaccination. However, both factors did not correlate with the knowledge of cervical cancer prevention. Besides that, misconception still occurred regarding the need of Pap smear after HPV vaccination among students. **Conclusion:** Knowledge of cervical cancer prevention is average among our fully vaccinated female university students. Although there has been improvement of awareness of HPV vaccination, there is still a need for continued health education to improve the perception and knowledge about HPV infection and cervical cancer prevention among young adults in our community.

Caesarean Scar Pregnancy: Treatment with Bilateral Uterine Artery Chemoembolization

Dr Kaamini Planisamy¹, Dr Aruku Naidu²

¹Hospital Raja Permaisuri Bainun Ipoh/Hospital Universiti Sains Malaysia, ²Hospital Raja Permaisuri Bainun, Ipoh

ABSTRACT

Objective: To report the first case of caesarean scar pregnancy managed using bilateral uterine artery embolization with methotrexate (MTX) and gelfoam in Malaysia and its outcome, as an alternative non-surgical fertility-sparing method of management. **Method:** A 25-year-old, G2P1 @ 13 weeks during initial presentation, with a confirmed diagnosis of caesarean scar pregnancy, was initially managed with systemic MTX injections (50mg/m²) - 2 doses given, 6 weeks apart. However, despite reducing levels of serum beta-human chorionic gonadotrophin (HCG), the caesarean scar pregnancy formed a vascular mass with increasing Doppler uptake. Patient was then managed with bilateral uterine artery MTX (50 mg/m²) embolization by interventional radiologist and was followed up monthly with serial transabdominal ultrasound scan and serum beta-HCG. **Result:** Serial transabdominal ultrasound scans of this patient over 3 months following uterine artery chemoembolization showed marked reduction in vascularity with reduced Doppler uptake of the caesarean scar pregnancy. However, the size of the caesarean scar pregnancy remained static. No major complications resulting from the uterine artery chemoembolization was observed. **Conclusion:** In the event of rare cases of caesarean scar pregnancies, uterine artery chemoembolization seems to be a safe and effective method of treatment and should be considered as one of the options of non-surgical methods of management especially in cases to preserve fertility.

Accessory and Cavitated Uterine Mass (ACUM)

Ana Vetriana Abd Wahab, Hatta Tarmizi, Siti Hajar, Lim Leek Mei

Sabah Women and Children's Hospital, Kota Kinabalu, Sabah

ABSTRACT

Case Report: A 19-year-old virgo intacta student from Sandakan, Sabah presented with severe pelvic pain and dysmenorrhea since menarche at the age of 13. Symptoms were not alleviated with COC or NSAID and she needed frequent visits to the ED for NSAID or opioid injections. Ultrasound findings were not conclusive hence MRI was performed which showed a bulky uterus with a well-defined rounded non-communicating cavitated mass measuring 3.6 x 3.7 x 4 cm within the left myometrium which is hypointense on T1 and T2. It has central hyperintense cavity on T1 and T2 which may represent haemorrhagic content or proteinaceous fluid. The main uterine cavity has a normal trigone shape with normal fundus and bilateral cornua visualised. Both tubes and ovaries are normal. Impression given by the radiologist was possible accessory and cavitated uterine mass (ACUM). Diagnostic hysteroscopy and laparoscopy was performed which showed a normal endo-cervical canal and normal uterine cavity with both ostia seen. There was no endometrial abnormality. The uterus had a vague globular mass located near the insertion of the left round ligament. Both Fallopian tubes and ovaries appeared normal. Vasopressin was injected into the myometrium to reduce the bleeding. A transverse incision was made on the anterior uterine surface over the swelling with the Harmonic Scalpel (Ethicon®). Approximately 5ml of a thick, chocolate coloured material spilled out during the dissection. Excision, however, was not technically easy as the limits of the mass was ambiguous. The uterine cavity was spared during dissection. The uterine and broad ligament defects were reconstructed with the coated Vicryl 1 (Ethicon®) and V-Loc™ 1 Barbed sutures. The specimen was placed in an endo-bag and retrieved from the peritoneal cavity through a 10 mm trocar. The patient was discharged 2 days after surgery. She did not experience dysmenorrhea in her next cycle when she came for follow-up. A repeat hysteroscopy was performed 8 weeks later which showed the uterine cavity to be normal, no defects with bilateral ostia seen. Macroscopic examination of the lesion showed a 3 cm irregular greyish white nodular mass with a blood filled cyst of 2 cm diameter. The HPE showed a cystic cavity lined by endometrial glands and stroma which confirmed the diagnosis of ACUM. There were no adenomyotic foci surrounding the myometrial tissue in the excised specimen. **Conclusion:** ACUM is a rare Mullerian anomaly. Early diagnosis and surgical intervention removing the mass can shorten the suffering of the patient.

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Xanthogranulomatous Oophoritis (XO): A Management Dilemma in a Pregnant Woman

Dr Jesrine Hong Gek Shan, Dr Mukhri Bin Hamdan, Professor Dr Siti Zawiah Binti Omar, Professor Dr Imelda Balchin, Associate Prof Dr Si Lay Khaing

University Malaya Medical Centre

ABSTRACT

Xanthogranulomatous inflammation is a rare but serious form of chronic granulomatous disorder that causes destruction to the affected organ such as kidney and bladder. Pathologically, it is characterised by lipid-laden foamy macrophages and cellular infiltrates such as neutrophils, lymphocytes and plasma cells. Xanthogranulomatous oophoritis (XO) involves the ovary and although it has previously been reported, this is the first case that coexists in pregnancy. A 30-year-old female, Para 1 was referred to our centre for further management of suspected ovarian malignancy. She presented with one-year history of gradual abdominal distension associated with non-cyclical right-sided abdominal pain and significant weight loss. She has regular menses with no urinary or bowel symptoms. Prior to coming to us, patient underwent ozone therapy, which she claimed improved her symptoms temporarily. Abdominal examination revealed a firm pelvic mass of 20 weeks size with restricted mobility. Ultrasound and CT scan showed a right-sided multiloculated cystic ovarian mass measuring 10x8 cm with no ascites, with normal tumour markers. Patient was advised for surgery; however, she conceived spontaneously and wished to keep her pregnancy. MRI revealed a complex right ovarian cyst with suspicion of malignancy. Throughout the pregnancy, she remained well but had moderate iron deficiency that required treatment with parental iron. The mass continued to increase in size with large vascularity seen on Colour Doppler. She had a planned elective repeat lower segment Caesarean section, right salpingo-oophorectomy and appendicectomy at 37 weeks of gestation. Intraoperatively, uterus was 36 weeks size being pushed to the left by the ovarian mass. There was no ascites however peritoneal washing was sent for cytology. There was a right-sided ovarian mass measuring 12x12 cm mimicking tubo-ovarian abscess, which was adhered to the recto-sigmoid colon and fixed to the Pouch of Douglas. Adhesiolysis was done and the cyst ruptured, extruding pus discharge. Incidental finding of hepatomegaly and subserosal fibroid measuring 4x4 cm which myomectomy was done. Histopathological examination revealed a diagnosis of right Xanthogranulomatous oophoritis and leiomyoma with negative cytology. Xanthogranulomatous oophoritis is a rare disorder which to date only 20 cases reported in literature and none reported to occur during pregnancy. Zhang et al reported in 2012 that clinical manifestations, imaging and macroscopic observation of XO are subject to be confused with ovarian malignancy. In pregnancy the window for surgical treatment is narrow. Despite knowing the risk of malignancy, patient wished to continue her pregnancy and refused any surgical intervention. Therefore, she was treated conservatively and allowed to carry the pregnancy till term.

Case Report: Small Cell Cervical Cancer in Pregnancy

Syahrul A, Lee CL, AR Norhaslinda, Loo KS, Daniel RD, Ghazali I

Department of Obstetrics and Gynaecology, Hospital Sultan Ismail, Johor Bahru, Johor, Malaysia

ABSTRACT

Neuroendocrine cervical cancers are rare, the reported incidence was 0.06 per 10,000 women and were even less commonly seen during pregnancy. Most neuroendocrine tumours are aggressive with lymphovascular metastasis and overall prognosis are poor. To date, not many cases have been reported. We report a case of late presentation of bleeding cervical cancer in pregnancy. A 34 years old Malay lady, gravida 7 para 6, no comorbidity had multiple visits to district hospital with the complaint of persistent per vaginal bleeding. She had required multiple blood transfusions due to symptomatic anaemia. She was noted to have cervical mass and had an early referral to Gynaecology Oncologist but defaulted. She only presented herself at 33 weeks of gestational due to premature contraction. Clinical assessment revealed exophytic cauliflower like growth involving the whole circumference of the cervix measuring about 8 cm x 7 cm, fornices, vaginal walls, both parametrium and pelvic side walls were free. The impression was cervical cancer stage 1B2 clinically with premature contraction. An emergency classical Caesarean section followed by Wertheim's hysterectomy and pelvic nodes dissection was performed. A live baby boy with a birth weight of 1.82 kg was delivered and the baby was admitted to NICU for observation. She was discharged well day 6 postoperatively. Histopathological examination revealed a huge fungating mass with irregular surface protruding from cervical canal measuring 105 x 95 x 62 mm arising from the endocervical tissue. It was a high grade neuroendocrine carcinoma, features consistent with cervical small cell carcinoma with extensive lymphovascular permeation, closed surgical margin with pelvic lymph nodes metastases. Unfortunately, the patient and her husband had refused adjuvant therapy despite being counselled on the risk of recurrent and distant metastasis. To date, there is no established guideline to specifically address its management. The management of small cell carcinoma and the impact of surgery, chemotherapy and radiotherapy to the survival rate have only been studied in a small number of patients. As such, managing such a case especially in a pregnant lady whom presented in labour without proper tissue diagnosis posed a great dilemma for Gynaecology Oncologist. In conclusion, recognition of cervical cancer in pregnancy preoperatively is important for operative planning and subsequent adjuvant therapy postoperatively. Furthermore, patient's counselling is of paramount importance particularly when patient is pregnant.

Broad Ligament Leiomyoma: Diagnostic Dilemma and Surgical Challenge

Nor Hidayah Y, Deepa S, Lee CL, Arivendran DR, Mansor MN, Ghazali I

ABSTRACT

Leiomyoma are the most common benign tumors of the uterus, present in almost 30% of all women in the reproductive age group. The commonest site being the uterus. Extra-uterine leiomyoma is rare to come by with cervical fibroids accounting for 1-2 % and broad ligament accounting for less than 1 % of cases. Pre-operatively, it poses a great challenge to diagnose broad ligament fibroids, as it is difficult to differentiate between an adnexal or uterine pathology. Here, we report a case of a rapidly growing broad ligament fibroid and illustrate the importance of accurate pre-operative diagnosis and the surgical challenge in removing the fibroid while preserving the uterus and vital organs. A 28-year-old, Para 1 with secondary subfertility for 9 years presented to us with complaints of severe dysmenorrhea and a mass per abdomen for 1-month duration. There was a pelvic mass of 18 weeks' size, which was mobile and able to get below. Ultrasound showed a uterus measuring 8 x 4.5 cm with a right solid adnexal mass measuring 10 x 8.5 cm. However, within 2 months the mass grew to 28 weeks' size with restricted mobility. This prompted for a CT scan in view of the nature and rapid enlargement of the mass. CT scan reported a huge heterogeneously enhancing pelvic mass likely ovarian in origin, measuring 20.4 x 9.6 x 27.8 cm. However, a differential diagnosis of a broad ligament fibroid was made based on clinical and radiological findings. An Exploratory laparotomy was performed, which revealed a huge solid multi-lobulated right broad ligament leiomyoma arising from the broad ligament distorting the whole pelvic anatomy. The challenge was to remove the mass without injuring the uterus, bladder and the ureter while preserving the blood supply to the ovary, fallopian tube and uterus. After 2 hours of careful meticulous dissection, the mass was removed as a whole and the uterus was preserved. She had an uneventful recovery. Diagnosing and managing a broad ligament fibroid is always a challenge. It may present as a mass per abdomen with pressure symptoms, menstrual irregularities or fertility issues. Ultrasound and CT scan may be helpful in shedding a clue to the diagnosis but is not diagnostic. Surgery is technically challenging due to its close proximity to the ureters and vascular blood supply to the uterus and ovary. Hence, meticulous dissection is required to prevent morbidity and complications.

A Rare Incidence of Chronic Non-Puerperal Uterine Inversion with Cauda Equina Syndrome

Eng SE, Arivendran DR, Ghazali Ismail

Hospital Sultan Ismail, Johor

ABSTRACT

Chronic uterine inversion in a non-pregnant uterus is rare, with just over 100 reported incidences throughout literature in the 20th century. It is often associated with uterine pathologies with prolapsed fibroids tending to be the most common inciting factor. Three contributing factors proposed for uterine inversion are 1) sudden emptying of the uterus which was previously distended by a tumour 2) thinning of the uterine walls due to an intrauterine tumour 3) dilatation of the cervix. This is a case of a 42 years old nulliparous Chinese female with underlying cauda equina syndrome. She presented to our Emergency Department complaining of heavy menstrual bleeding and generalised weakness and lethargy. On further questioning, she had also noticed a mass gradually protruding per vagina for 3 years duration. She was noted to be pale with no mass palpable per abdomen. Vaginal examination revealed a well circumscribed 6x5 cm mass, thought likely to be a prolapsed fibroid with a thick stalk attached to what was assumed to be an inverted uterus. It was infected and foul smelling with necrotic patches over it. She was started on broad spectrum antibiotics and transfused blood as her haemoglobin level was 4.9 g/dl. In view that the prolapsed fibroid was unreducible, she underwent an examination under anaesthesia and vaginal myomectomy. The uterus could not be reduced due to the constriction band and oedema. After 2 weeks of antibiotics and optimisation of haemoglobin, she was counselled for definitive surgery. She was not keen to conceive, thus she consented for a hysterectomy. We proceeded with a Haultain procedure and a total abdominal hysterectomy and bilateral salpingectomy. Most reports cite a prolapsed fibroid as the cause of chronic uterine inversion, with some reporting that it was infected. In this case, the predisposing factor was likely to be the cauda equina syndrome and a large submucosal fibroid. The long-standing straining to urinate and defecate due to the spine pathology would have precipitated the fibroid to prolapse leading to a chronic uterine inversion. Surgery is the mainstay of treatment for chronic uterine inversion either a hysterectomy or uterine conserving procedures like a Haultain Procedure and Hysteropexy. Management of such cases should be tailored and personalised according to the patient's wishes and completion of family to avoid recurrence of inversion.

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Comparative Study on Surgical Outcomes between Laparoscopic and Open Cornuotomy for Cornual Ectopic Pregnancy of Urban Tertiary Centre in Malaysia

H Abdul Hamid¹, NA Kasim², NH Zainal Abidin², AM Muda², WAH Wan Ghazali²

¹Obstetrics and Gynecology Department, Faculty of Medicine & Health Sciences, Universiti Putra Malaysia (UPM), Serdang, Selangor, Malaysia, ²Obstetrics and Gynecology Department, Hospital Putrajaya, Presint 7, Putrajaya, Malaysia

ABSTRACT

Objective: To evaluate the prevalence of interstitial ectopic pregnancy and compare the surgical outcomes of laparoscopic cornuotomy (LC) and open cornuotomy (OC) of cornual ectopic pregnancy as well as to analyse its associated factors. **Design:** This was a cross-sectional study in a single institution. **Materials and Methods:** This study was conducted involving the cases of interstitial ectopic in Hospital Putrajaya, Kuala Lumpur, Malaysia, over a period of 10 years (2005 – 2014). Data on socio-demographic, clinical profile, peri-operative and post-operative were obtained from the electronic medical records (EMR). **Results:** The prevalence of cornual pregnancy is 4% (n=14) from a total of 347 ectopic pregnancy cases in Putrajaya Hospital. The mean + SD age of patient in the LC group and OC group is 29.3 ± 5.9 years and 31.4 ± 7.3 years, respectively. Meanwhile, the duration of hospitalisation and mean operating time in the LC group are both significantly shorter compared to the OC group (1.43 ± 0.54 versus 2.57 ± 0.79, and 61.4 ± 15.7 mins versus 97.1 ± 38.2 mins, respectively; P<0.05). There is no statistically significant difference between both groups for estimated blood loss, requirement of blood transfusion, complications and future fertility. **Conclusion:** Laparoscopic cornual resection (cornuotomy) is a safe and less invasive procedure with a reasonable complication rate. Proven by its feasibility, this method should be considered as initial treatment in managing cases by trained hand surgeons.

KEY WORDS:

Cornual pregnancy, interstitial pregnancy, laparoscopic cornuotomy, laparotomy resection, surgical outcome and reproductive outcome

Accuracy of Pap Smear and Colposcopy Screenings in the Early Detection of Pre-invasive Disease and Cervical Cancer at a Tertiary Gynaecology Center in Malaysia

Theeban T, Arivendran D R, Ghazali Ismail

Newcastle University, Hospital Sultan Ismail, Johor Bahru

ABSTRACT

Objective: To Determine the Accuracy of Pap smear & Colposcopy Screenings in the early detection of pre invasive disease and cervical cancer at a tertiary Gynaecology Center in Malaysia. Pap smear has been the gold standard for cervical cancer screening for the past few decades. Colposcopy has been used as an adjunct in diagnosing pre invasive cervical disease and cervical cancer. This was a retrospective observational study done on patients attending the colposcopy clinic in the Department of Obstetrics and Gynecology, Hospital Sultan Ismail Johor Bahru, a tertiary gynaecological referral hospital. The study evaluated all abnormal Pap test referred for colposcopy from 2014 to 2016. **Methods and Results:** The study was done on 163 women who came with an abnormal Pap smear or abnormal looking cervix or symptoms. We looked at several key points such as the incidence and demographics of patients with abnormal smears referred for colposcopy, the indications of referral for abnormal Pap smears, the correlation between the Pap smear and colposcopy results, the correlation between colposcopy finding and histology results and finally the incidence of cervical cancer detected by Pap smear and colposcopy. The commonest age group referred for colposcopy was between the ages 40 to 60 years old. The majority of the patients (32%) who were referred for colposcopy had HSIL. The percentage of Pap smear-colposcopy correlation over the 3 years was averaging 50% to 65% which is roughly the sensitivity of the Pap test. The rate of correlation between colposcopy and final histopathology improved with each year as the training of doctors improved. In 2014, 59% of the patient's colposcopy results correlated with the biopsy, while in 2016, 68% of the data correlated. This is fairly similar to other centers which have recorded correlation rates of 60 – 70%. **Conclusion:** Cervical cancer is a preventable disorder as there are effective screening and diagnostic tools. A Pap smear can detect abnormal cells in the cervix while colposcopy helps in detecting the lesions on the cervix with better precision and helps confirm the diagnosis. From our study, we also found that colposcopy performs better in detecting high grade lesions than low grade lesions. Our study also showed that multiple colposcopic guided biopsies are more specific and accurate than single biopsy alone. As doctors training improved, the rate of correlation and positive predictive value also increased.

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Good or Bad News? When Recurrent Ipsilateral Tubal Pregnancy after Salpingectomy happens

Chuah Joo Ngor, Hospital Slim River, Perak

Aruku Naidu, Hospital Raja Permaisuri Bainun, Perak

ABSTRACT

Introduction: Ectopic pregnancy (EP) occurs in 1-2% of all-natural conceptions, causing significant maternal morbidity and mortality. Ectopic pregnancy can recur anywhere in the abdominal or pelvic cavity, including the rare previous salpingectomy stump and its management can be either conservative, medical or surgical. Laparoscopic salpingectomy has been the gold standard in haemodynamically stable patients. **Case Report:** We are reporting a case of a 31 years old lady, in her second pregnancy at 9 weeks of period of amenorrhoea, presented to early pregnancy assessment unit with right iliac fossa pain for 3 days. She had a previous laparoscopic right salpingectomy for ectopic pregnancy 4 months back. On diagnostic laparoscopy, she was found to have hemoperitoneum and a bulging mass about 2 cm in diameter at the proximal end of the previous salpingectomy remnant area. Total salpingectomy was done and histopathologic examination confirmed the diagnosis. **Conclusion:** Given the possibility of transperitoneal migration of sperms or embryos, previous ipsilateral ectopic pregnancy does not exclude recurrence at the same side and thus requires clinician's high index of suspicion.

KEY WORDS:

Ectopic pregnancy, previous salpingectomy, recurrent

Total Laparoscopic Hysterectomy: A 4 Year Experience

Wilkinson YJ Tan, Abd Wahab AV

Department of Obstetrics and Gynaecology, Hospital Wanita dan Kanak-kanak Sabah

ABSTRACT

Objectives: Hysterectomy is an important procedure in the management of many gynaecological disorders. There are 3 popular methods of performing a hysterectomy; abdominal hysterectomy, laparoscopic assisted vaginal hysterectomy and total laparoscopic hysterectomy. Vaginal and laparoscopic hysterectomy are associated with low surgical risks and involve shorter hospital stay in comparison with abdominal hysterectomy. Reviews have also found that vaginal and laparoscopic hysterectomy are associated with fewer infections, episodes of raised temperature and women resumed normal activity more quickly compared to the vaginal route. We performed a retrospective review of total laparoscopic hysterectomy performed at our center over a 4-year period. Our objectives were to determine our progress in laparoscopic surgery and to identify areas for further improvement. **Methods:** Patients' informations are obtained from the operating theatre record book. Patients who have undergone a TLH during the period were identified and their clinical notes were traced. Duration of surgery, intra operative complications, operative blood loss, duration of hospital stay, short term and long term complications informations were then obtained. Our findings are then compared to published standards and rates of complications by other centers. **Results:** We performed 58 TLH between 2013 to 2016; 6 in 2013, 15 in 2014, 24 in 2015 and 13 in 2016. The average surgical time, operative blood loss and duration of post-operative hospital stay were calculated and tabulated. There was one bladder injury in 2013 requiring on table referral to urology team for bladder repair and ureter stenting. There was one patient who had prolonged hospital stay in 2014 due to persistent post-operative pain and one case of rectovaginal fistula. There were two patients with subcutaneous emphysema in 2015 and no documented operative complications in 2016. **Conclusions:** There remains a steep learning curve in training a surgeon to perform laparoscopy surgery. However, given the better outcome and lesser patient's complications, laparoscopic surgery is still an important skill to learn and train. Our center has shown some improvement in reducing operating time, blood losses and rates of complications. Adequate training and a suitable selection of patients will make laparoscopic hysterectomy simpler to perform.

Demographic Study and Five-year Survival of Cervical Cancer Patients in Hospital Tuanku Fauziah, Perlis

Raudzah Ramli, Amira Anis Ali Yeon, Nurul Izyani Rosley, Sharina Haron, Zaridah Shaffie

Obstetric and Gynaecology Department, Hospital Tuanku Fauziah, Kangar, Perlis

ABSTRACT

Objectives: To analyse the five-year survival of cervical cancer patients in Hospital Tuanku Fauziah, Kangar, Perlis. **Methods:** A retrospective study involving patients with cervical cancer in Hospital Tuanku Fauziah, Kangar, Perlis. Data of cervical cancer patients from 1st January 2000 to 31st December 2011 were searched from oncology cards from clinic. An exclusion criterion was the missing data. The demographic data and survival rate according to stages, age, histology, presence of lymphadenopathy and treatment received by patients were analysed using SPSS. The survival probability was determined using Kaplan-Meier method. Permission was received from Ethical Committee HTF. **Results:** 69 patients were identified. 43.5% (N=30), 34.8% (N=24), 7.2% (N=5) and 14.5% (N=10), were diagnosed at stage I, II, III and IV, respectively. Mean age at diagnosis was 54.5 year. Majority of the patients were Malay (75.4%) followed by Siamese (13%). Majority of cases were squamous cell carcinoma, 63.8% (N=44). Overall 5-year survival was 52.2% (N=36). Mean survival time was 131.7 (95% CI: 106.6, 156.8) months. Patients diagnosed at stage III and IV had poorer survival of 40% and 20%, respectively, as compared to stage I and II patients, with survival of 63.3% and 54.2%, correspondingly. The 5-year survival was higher in patients who received surgery as primary treatment (71%) compared to non-surgical group (29%). **Conclusion:** The overall 5-year survival of cervical cancer in this study was 52.2%. The survival of those at early stage is better than advanced stage. Patients who underwent surgery as primary treatment had a better survival rate as compared to those who had no surgery done.

Successful Ovarian Conservation following Laparoscopic Detorsion of Apparent Gangrenous Twisted Ovarian Cyst in Adolescents: A Case Series

Maizatul Hasnida Binti Mohd Basir, Yong Soon Leong, Sherlyn Wong Ing Lin, Ong Zhong Wei, Kang Marcus

Department of Obstetrics and Gynaecology, Sibu General Hospital, Sarawak

ABSTRACT

Background: Ovarian torsion is a rare gynaecological emergency in adolescent population with the incidence ranges from 2/10,000 to 4.9/100,000. It often requires immediate surgical intervention with the aim to salvage the affected ovary. If the ovary is clinically deemed non-viable with gangrenous macroscopic appearance, oophorectomy is performed traditionally. Currently, a newer conservative method of detorsion and conservation of the twisted ovarian cyst has emerged as it is proven that seemingly gangrenous ovarian tissue is still capable of remaining viable even after prolonged ischemia. The theoretically risk of untwisting a gangrenous ovarian cyst is pulmonary embolism but has been shown to be unlikely. **Case:** We reported two cases of young adolescents presented with acute abdomen secondary to ovarian cyst torsion and both were successfully managed with a two-stage conservative laparoscopic surgery (laparoscopic detorsion followed by interval cystectomy). Although the twisted ovary appeared gangrenous during emergency diagnostic laparoscopy in both cases, detorsion rather than conventional oophorectomy was performed. Subsequent second-look laparoscopy revealed viable ovary which led to only performing a cystectomy and thus salvaging a previously apparent gangrened ovary. Histopathological examination confirmed benign ovarian cyst for both cases. **Conclusion:** Laparoscopic detorsion is currently the preferred choice of treatment for twisted ovary in adolescents, despite its gangrenous appearance. This would be a superior option to maximise female ovarian reserve and future reproductive potential.

Idiopathic Spontaneous Intraperitoneal Hemorrhage in Pregnancy – A Case Report

Shir Lynn Chew, Carol Lim

Obstetrics and Gynaecology Department, Temerloh Hospital, Pahang, Malaysia

ABSTRACT

Idiopathic spontaneous intraperitoneal hemorrhage (ISIH) is very rare, associated with high mortality if not promptly diagnosed and treated. We present a case of ISIH occurring in a pregnant woman in our hospital. FD, 40-year-old Malay lady in her first pregnancy at 32 weeks gestation, presented with 1 day generalised abdominal pain and bilious vomiting. Fetal movements were good. She was stable but had tenderness over the right iliac fossa. An urgent exploratory laparotomy was performed when assessment revealed large amount of free fluid and intrauterine fetal demise. Massive hemoperitoneum was confirmed without any obvious source of bleeding, except of a small hematoma at the left iliac fossa measuring 4 cm x 1 cm seen. About 3800 ml blood was evacuated, abdomen was packed and closed up. FD undergone pelvic angiogram but there was no evidence of active arterial haemorrhage or abnormal vessel malformation. She then had relaparotomy 2 days later to remove abdominal packs. The previously seen hematoma at the left iliac fossa remained unchanged in size. FD delivered a macerated still birth a few days later after induction. A total of 6 pints packed cell, and 4 units of fresh frozen plasma were transfused throughout. FD subsequently developed right pulmonary artery embolism and right common iliac vein thrombosis, which were provoked following the ISIH and prolonged hospital despite thromboprophylaxis. A series of blood investigation were done to rule out haematological disorder, however no abnormality was detected. FD subsequently recovered well. ISIH was first described in pregnancy by Barber in 1909. Green and Powers termed it "intra-abdominal apoplexy" in 1931 to describe an unpredictable, catastrophic event involving the spontaneous rupture of an intra-abdominal vessel. The causes of non-traumatic spontaneous hemoperitoneum include vascular, haematological, hepatic, splenic, gynaecological or cryptogenic disease. In pregnancy they are mostly due to utero-ovarian or splenic artery rupture. Idiopathic bleeds are believed to be vascular bleeds which have stopped following drop in blood pressure at the time of operation, making it difficult to site, which might recur if the blood clots are dislodged. The bleeding source could not be identified in approximately 30% of cases, either by CT scan, angiography or intra-operatively. ISIH has been reported to occur anytime during pregnancy, with 61% antepartum, 8% intrapartum, and 21% postpartum. These cases presented variedly with acute typical abdominal pain and shock. High index of suspicion, early intervention and excellent resuscitation are keys to successful management as in the case of FD.

Unmet Need for Family Planning among Doctors and Nurses in University Kebangsaan Malaysia Medical Centre (UKMMC)

Syarifah Raihan Syed Kamaruddin¹, Dr Yulianty Arifuddin¹, Prof Dr Zaleha Abdullah Mahdy¹, Rahaya Bustamam², Prof Dr Harlina Halizah Siraj³

¹Department of O&G, Hospital Canselor Tuanku Muhriz, PPUKM, ²Department of Nursery, Hospital Canselor Tuanku Muhriz, PPUKM, ³Department of Medical Education, Hospital Canselor Tuanku Muhriz, PPUKM

ABSTRACT

Objective: To determine unmet need for family planning among doctors and nurses in UKMMC. **Method:** A prospective cross-sectional survey was conducted to investigate unmet need for family planning among female doctors and female nurses in UKMMC between 1st January and 31st January 2015. Questionnaire was created in English language using Modified DHS model questionnaire as available in DHS Analytical Studies 2012. There were two versions of the questionnaire, the printed copy and the online survey using the server SurveyMonkey (<https://www.surveymonkey.com/r/UNMETneedCONTRA>). The first part of the questionnaire covered socio-economic and demographic data while the second part contained information on family planning. Both groups were compared in terms of unmet need, total demand for family planning and the reason for not practicing contraception. **Results:** A total of 110 female doctors and 530 female nurses were enrolled in this study. The mean age was 35 years old in doctors' group and 34 years old in the nurses' group. Higher current users of contraception among the nurses compared to doctors, which is 28.8% and 16.8% respectively. Among the doctors, higher proportion was observed for unmet need for spacing in comparison with that for limiting (12.7% vs 4.2%). These findings were found to be similar in the nurses' group, with 16.8% have unmet need for spacing while 7.2% have unmet need for limiting. Using Westoff Model the total unmet need was estimated 19% for the doctors and 24.9% in the nurses. Total demands for family planning among doctors were much lower compared to the nurses (35.8% vs 53.7%). 26.7% in the doctors' group gave fertility related reasons as the highest reason for not using contraception while 21% of nurses gave opposition to use. Lack of knowledge was given by 3% in the nurses group. **Conclusion:** Unmet need for family planning among female doctors was lower than female nurses, but comparable to the national value of 17%. The result of this study necessitates the need for health management to take into account the concept of reproductive health education.

Growing Teratoma Syndrome: Behaves Malignant but not always Malignant!!!

Arivendran DR, Ismail G, SW Tham

Hospital Sultan Ismail, Johor Bahru, Hospital Melaka, Melaka

ABSTRACT

Growing Teratoma Syndrome (GTS) was first described in 1976 as chemotherapeutic retroconversion. It is a very rare condition among men and women with appropriately treated germ cell tumours characterized by persistence or development of enlarging masses during or after adjuvant chemotherapy. There have only been less than 80 cases reported in literature thus far. Although the incidence of GTS after testicular non seminomatous germ cell tumours is 1.9 – 7.6%, the incidence after malignant germ cell tumours of the ovary is unknown. However due to increasing awareness regarding this condition, more cases have been reported. We would like to present 3 cases seen over the last year of Growing Teratoma Syndrome. All 3 cases had a fairly similar history. They were all young girls below 30's who presented with a complex ovarian mass suspicious of malignancy with raised tumour markers. They all underwent fertility sparing surgery which revealed an early stage germ cell tumour of an immature teratoma. However, during adjuvant therapy, 2 of them become symptomatic. Radiological imaging showed new pelvic and abdominal masses which were increasing in size. This was not in relation to the tumor markers which had normalized. Both girls were offered 2nd line chemotherapy or surgical intervention. Even on 2nd line chemotherapy the masses grew and caused compressive symptoms. Then they opted for debulking surgery. Optimal cytoreduction was achieved in both cases; however, the histopathology showed mature teratoma with no evidence of immature component. They were followed up closely and remain asymptomatic with no evidence of recurrence. The other girl is still under surveillance as she has decline surgery or chemotherapy. GTS is a rare entity but should be suspected when tumor masses persist or develop with normal tumor markers during or after adjuvant chemotherapy for non-seminomatous germ cell ovarian neoplasia. Familiarity with GTS may help avoid unnecessary chemotherapy and early intervention when it is still feasible for debulking reducing the risk of complications and morbidity. Optimal cytoreduction at surgery for GTS offers an opportunity for cure.

Nephrogenic Diabetes Insipidus following Pelvic Organ Prolapse Surgery – A Rare Presentation

Ng PY, Chooi KY, Tan C, Noraihan MN

Urogynaecology Unit, O&G Dept, Hospital Kuala Lumpur

ABSTRACT

Introduction: Nephrogenic Diabetes Insipidus (NDI) is a clinical condition with polyuria and polydipsia. It resulted from insufficient production or end organ resistance to antidiuretic hormone (ADH). There are 2 types of DI i.e. central Diabetes Insipidus and Nephrogenic Diabetes Insipidus (NDI). The incidence of DI is 3 in 100,000 populations. Acquired NDI is the most common cause of NDI. These include kidney or systemic disorder. **Case Presentation:** This is a case report of a 57-year-old lady with pelvic organ prolapse. Her urine output ranges from 2,000 to 2,500 mls/day prior to surgery. Following pelvic organ prolapse surgery, her urine output ranges from 5,000 to 9,000 mls/day. Her urine osmolality is low. She was monitored and her deficit was replaced. Her urine output stabilised after 3 days post-surgery. She was discharged 1 week after surgery. **Conclusion:** DI is a rare condition and NDI even rarer. Monitoring fluid post-surgery is important. Adequate correction of electrolyte imbalance is important for patient wellbeing.

Obstructed Hemivagina Ipsilateral Renal Agenesis with infertility – Diagnosis and Management

Dr Ana Vetriana Abd Wahab, Dr Lavitha Sivapatham, Dr Mohamed Hatta Tarmizi, Dr Yogeeta Gunasegran

Sabah Women and Children's Hospital

ABSTRACT

Case Report: A 33-year-old lady first presented in 2008 with lower abdominal pain and fever, one month after having a laparotomy appendectomy in Brunei. She attained menarche at 12 and had regular menstrual cycles with minimal dysmenorrhea. She had undergone two laparotomies previously at age 2 for ovarian cyst and subsequently at the age of 17, for a tuboovarian abscess. During her admission in 2008, she underwent a CT scan of her thorax, abdomen and pelvis. The uterus was bulky with haematometra, with multiple loculated pelvic collections, suggestive of a pelvic abscess. Her right kidney was absent. She was given intravenous antibiotics for the PID, to which she responded, therefore, not requiring surgery, which would have been difficult in view of her previous multiple laparotomies. She developed PID in 2012, which resolved with antibiotics and followed up by a consultant at the gynaecology clinic. In 2014, pelvic ultrasound revealed a uterine didelphy, with a hypoechogenic mass below the uterus. At this time, she was seen by a gynaecologist with a special interest in Mullerian Anomalies, who suspected that she had OHVIRA (obstructed hemivagina, ipsilateral renal anomaly with uterine didelphy). Subsequently, MRI confirmed the findings of a transverse vaginal septum obscuring the cervical opening on the right side and a single left kidney. An examination under anaesthesia revealed a bulge at the right lateral vaginal wall with obscured left cervix. The left uterus had a normal endometrial cavity with a single tubal ostium. A small opening was made on the right vagina to relieve the obstructed side. After being married for 2 years and unable to conceive, IUI was attempted but failed. Subsequently, she underwent a vaginal septoplasty, hysteroscopy and a hysterosalpingography (HSG) with an imagine intensifier (II) under general anaesthesia to assess her uterine cavities and tubal patency. HSG is a better option due to the risks involved with a laparoscopy and extensive pelvic adhesions due multiple laparotomies. Post septoplasty, both cervix with normal endometrial cavities were visualized. Bilateral tubal patency was confirmed. **Conclusion:** OHVIRA is a rare Mullerian Anomaly that is often missed as in this case. A high index of suspicion is required to be able to diagnose it correctly.

Dermatofibrosarcoma Protuberans of the Vulva: A Case Report

Hanim S, Lee CL, Hashim G, Badrul ZM, Ghazali I

Department of Obstetrics and Gynaecology, Hospital Sultan Ismail, Johor Bahru, Johor, Malaysia

ABSTRACT

Dermatofibrosarcoma protuberans (DFSP) is a rare, low to intermediate grade and well differentiated sarcoma of mesenchymal tumour. To date, only less than 40 cases reported for vulva DFSP in the literatures. A 42, Chinese lady presented to our department with bilateral vulva swelling for one year with accelerated growth for the past 1 month. This was associated tenderness and pruritus. On examination, there were 3 ill-defined vulval masses, the largest one measuring 8 x 8 cm on right vulva; another 2 masses were present on the left vulva, each measuring 4 x 4 cm. The mass was firm, non-tender with limited mobility. There were no regional lymph nodes palpable. Doppler ultrasound scan did not reveal any hypervascularity within the solid mass. An inadequate sample was obtained from Fine Needle Aspiration (FNAC). The clinical impression then was vulva and mons pubis lipoma. A wide local excision was performed under general anaesthesia. The procedure was uneventful. The histopathological report showed DFSP with incomplete margins. The tumour cells are diffusely positive for CD34 but negative for pancytokeratin, desmin, SMA, S 100, CD117 and CD99 stains. Ki67 proliferative index is about 20-30%. DFSP was first reported by Hoffman et al almost nine decades ago. Following that, several reports have been published with the majority involving the body trunk and limb extremities. Other rare locations include scalp, forehead and genital area. Immunochemical staining has shown almost 100% sensitivity in differentiating the tumour from benign condition. As reported, FNAC may not yield a definitive diagnosis. Current treatment modalities include wide local excision, Mohs micrographic surgery and radiotherapy. DFSP has a high recurrence rate ranging from 10-60% even with clear margins of 2 cm. Mohs Surgery is preferred as it allows immediate microscopic examination of entire margin after surgery. Radiotherapy has been used in conjunction with surgical intervention as DFSP is a radiosensitive tumor and most studies have reported that it reduces the rate of recurrence. To date, chemotherapy is not an option of treatment for DFSP and literatures do not support its efficacy. In conclusion, vulva DFMS is extremely rare occurrence. Recognition of this unique clinical entity preoperatively is important for surgical planning to minimize the chance of recurrence.

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Bowel Endometriosis: A Challenge to Gynaecologist

Ng BK¹, Fathy R¹, Ng WYL², Nordashima AS³, Zainuddin AA¹, Lim PS¹

¹Department of Obstetrics and Gynaecology, UKM Medical Centre, ²Department of Radiology, Hospital Kuala Lumpur, ³Department of Pathology, UKM Medical Centre

ABSTRACT

Objective: Bowel is the most common extragenital manifestation of endometriosis. Clinical suspicion is of utmost importance for achieving its diagnosis. Management of this condition is always challenging to the gynaecologist. **Method:** Case report of bowel endometriosis in which patient presented with dyschezia and haematochezia prior to her menses for the past two years. **Result:** A 44-year-old Para 2, woman presented with worsening dysmenorrhea and dyspareunia. She also experienced dyschezia and haematochezia prior to her menses for two years. Examination revealed a fixed retroverted uterus. Computed Tomography scan showed focal bowel thickening. She underwent colonoscopy examination and biopsy that revealed stromal endometriosis. She was subsequently treated with dienogest and became asymptomatic. **Conclusion:** Diagnosis and management of this debilitating illness was revisited and discussed.

Minimally-Invasive Gynaecology Management of a Large Adnexal Mass in a morbidly obese ten year old

Aizura-Syafinaz Adlan, Aida Othman, Noor Azmi Mat Adenan

Dept of Obstetrics and Gynaecology, University Malaya Medical Centre

ABSTRACT

Huge adnexal masses in children are uncommon and therefore approach to management may pose a challenge; particularly in an obese one. A ten-year-old girl, with a BMI of 38 kg/m², underlying metabolic syndrome and obstructive sleep apnoea, presents with a 2-month history of excessive weight gain and progressive abdominal distension. Examination revealed a cystic mass in the abdomen, corresponding to a 28 week-size gravid uterus. Ultrasound and CT imaging was done, revealing a huge intraperitoneal cystic mass arising from pelvis, measuring 11.2 x 23.3 x 21.9 cm in size, with both ovaries normal bilaterally. Serum markers were within normal range. A minimally invasive approach was offered in view of her age and co-morbid. A modified laparoscopic drainage and cystectomy was performed for therapeutic and diagnostic purpose. Intraoperative findings revealed a huge para tubal cyst arising from left fallopian tube. Four litres of clear fluid drained and cystectomy was performed. Conclusion: Minimally-invasive approach to large adnexal masses is an alternative, possibly superior, approach to management of large para tubal cyst in children and adolescents.

Serous Tubular Intraepithelial Carcinoma (STIC): A Profound Discovery of Origins of Pelvic Serous Carcinogenesis

Kunjumman A, Dhorai Raja A, Ghazali Ismail

ABSTRACT

Ovarian cancer is the 8th most common cancer among women worldwide. The incidence of ovarian cancer worldwide is 11 per 100,000 and in Malaysia it is the 4th most common malignancy in women after breast, colorectal and cervical cancer. Ovarian serous carcinoma is the most common epithelial ovarian malignancy. It is most often asymptomatic in early stages and often diagnosed in advanced stages. It is found that the fallopian tubes may be the primary site of origin of ovarian or pelvic serous carcinoma of both low grade serous carcinoma (LG-SC) and high grade serous carcinoma (HG-SC). Non-invasive STICs have been identified in 3-12% of prophylactically removed tubes of BRCA carriers, especially in the fimbrial part. Asymptomatic patients with BRCA 1&2 gene mutation and p53 gene mutation expression were found to have STIC in the fimbriae of the fallopian tubes and it involved the secretory cells of the tubes. **Case:** This is a case of a 40-year-old Para 0+4 who initially presented with prolonged menses and lower abdominal pain for 2 weeks duration. An abdominal examination revealed a 24-week size mass which was found to be solid cystic in nature by bedside ultrasound. CT scan revealed diffused lesions over the peritoneum as well as nodal involvement and multiple cystic lesions in the liver. A pipelle histopathology sampling revealed poorly differentiated adenocarcinoma unable to exclude primary or secondary origin. Her ca125 level was >2,000. She subsequently underwent a debulking surgery after 5 cycles of neoadjuvant chemotherapy. Histopathology report of the specimens sent revealed metastatic HG-SC of the uterine corpus and left ovary, STIC of the left fallopian tube with invasive HG-SC. **Discussion:** Is ovarian cancer preventable? With supportive evidence that the fallopian tube is the likely source of pelvic serous carcinoma, bilateral salpingectomy with ovarian conservation (BSOC) may be the next line of management in high risk patients or for those who have completed families. In patients with BRCA 1 or 2 mutation, risk reducing salpingoophorectomy (RRSO) can be considered once family is completed. Having said this, side effects of oestrogen depletion must be anticipated.

Validation of the Malaysian Version of the P-QOL Questionnaire

Rima Anggreng Dasrilsyah¹, Prof Dr Lim Pei Shan¹, Dr Ng Beng Kwang¹, Dr Ixora Kamisan¹, Dr Nor Haslinda Abdul Aziz¹, Assoc Prof Dr Khong Su-Yen², Assoc Prof Dr Zalina Nusee³

¹Department of Obstetrics and Gynaecology, University Kebangsaan Malaysia Medical Centre, ²Department of Obstetrics and Gynaecology, University Malaya Medical Centre, ³Department of Obstetrics and Gynaecology, International Islamic University of Malaysia

ABSTRACT

Objective: The aim of this study was to translate and validate P-QOL questionnaire in Malay language. **Methods:** The P-QOL questionnaire was translated into Malay. Test-retest reliability and internal consistency were tested. All patients who visit the gynaecologic outpatient clinic of PPUKM, PPUM and IIUM between January 2016 and May 2017 completed the P-QOL questionnaires. **Results:** One hundred twenty patients with symptomatic prolapsed pelvic organ and one hundred eighty asymptomatic patients were included. The Cronbach's alpha for each domain was greater than 0.70 which confirmed that there was a highly acceptable internal consistency. The value varied between 0.88 (role limitation) and 0.912 (sleep/energy). Test and retest reliability showed a significant correlation between the total scores for each domain ($p < 0.001$). There was a significant correlation between P-QOL domain scores and vaginal examination findings (POP-Q). With a higher POP-Q stage, a higher impact on quality of life was detected in symptomatic patients. The total scores from all domains were significantly higher in symptomatic patients. **Conclusion:** The Malay version of P-QOL is valid, reliable and easily comprehensible instrument to assess quality of life and symptoms in Malay-speaking patients with urogenital prolapse.

KEY WORDS:

Pelvic organ prolapse, quality of life, validation, Malay, questionnaire

Huge Vulvar Tumour: A Rare Case of Vulvar Angiomyofibroblastoma

Aizura-Syafinaz Adlan, Aida Othman, Noor Azmi Mat Adenan

Department of Obstetrics and Gynaecology, Faculty of Medicine, University of Malaya, Kuala Lumpur, Malaysia

ABSTRACT

Angiomyofibroblastoma (AMF) is a rare, benign neoplasm commonly involving the vulvovaginal region, nearly always at the labia majora. A 52-year-old premenopausal woman, presented with a large mass at the right vulva for a year, which was noted to be increasing in size. Examination of the perineum revealed a 20x20 cm firm pedunculated mass, with stalk measuring 5 cm in diameter. A CT scan was reported as a pedunculated vulval tumour with evidence of muscular fascia involvement. In May 2015, a wide local excision and right labia reconstruction was performed. The mass consisted of mainly fat tissues, vessels and weighed 1 kilogram. The 8 cm skin defect was repaired in layers and healed well. She has been under our follow up and remains well without any recurrence. **Conclusion:** AMF is usually painless and slow growing tumour. Complete wide excision is usually curative. Patients usually ignore their symptom and delay seeking medical attention when mass is small. After excluding other common benign tumours of the vulva, AMF should be considered in the differential diagnoses even in the younger women.

A Case Series: Ulipristal Acetate in the Management of Uterine Fibroid in Malaysia Women

Koik YK, Quek YS, Ng SY, Sofiah Sulaiman, Jamiyah Hassan

Obstetrics and Gynaecology, University Malaya Medical Centre

ABSTRACT

Objective: An observational case study to evaluate the efficacy and safety of UPA in patients who choose UPA as the treatment protocol. **Method:** Ulipristal acetate (UPA) administered for 2 treatment cycles of 3 months each which was 5 mg daily oral ulipristal acetate for first 3 months and followed up monthly to monitor the symptoms and volume of fibroid. The second treatment cycle would be started at the earliest during the second menstruation after the first cycle. **Result:** Preliminary data showed a marked reduction in intramural myoma volume after 3 months and 6 months courses of 5 mg UPA which is 18.5% and 29% respectively, while subserous myoma had a reduction of 14.5% of the total size. Our patients also experienced significant reduction in the symptoms of uterine bleeding with UPA. The endometrium was noted to be thickened during the treatment cycle but this thickening was normalized during the treatment free period. The main side effects reported were intermittent hot flushes, headache and lower abdominal pain which were not present after the first month of treatment. **Conclusion:** UPA demonstrate the efficacy and safety profile in treatment of symptomatic uterine fibroid.

A Review of Laparoscopic versus Open Myomectomy in Hospital Sultan Abdul Halim, Sungai Petani, Kedah, Malaysia

Kunleng Sheng¹, Ahmad MF², AM Nur Rashidah³, JW Liew¹, Anna Liza Roslani⁴, S Kathirgamanathan¹, K Kannaiah¹

¹Department of Obstetrics and Gynaecology, Hospital Sultan Abdul Halim, Sungai Petani, Kedah, ²Department of Obstetrics and Gynaecology, Hospital Kulim, Kedah, ³Department of Obstetrics and Gynaecology, Hospital Serdang, Selangor, ⁴Department of Obstetrics and Gynaecology, Kuantan Medical Centre, Pahang

ABSTRACT

Objective: To compare laparoscopic and open myomectomy for patients with fibroids with regards to surgical outcomes, recurrence rate and spontaneous pregnancy outcomes following Myomectomy in Hospital Sultan Abdul Halim, Sungai Petani. **Methods:** This is a retrospective cross-sectional study of women who underwent myomectomy either via laparoscopy or laparotomy. A linked database containing patient data for hospital admission, operating room and clinic follow-up from January 2016 until December 2016 in Hospital Sultan Abdul Halim, Sungai Petani, Kedah was used. All women below the age of 40 years who had undergone a myomectomy (laparotomy and laparoscopy) were included. Patients who had pedunculated or submucosal fibroids were excluded. Both surgical methods for myomectomy were compared regarding surgical outcomes, blood loss, length of hospital stay, recurrence rates and pregnancy outcomes. Statistical analysis was done using SPSS version 22.0 by chi-square test, and the P value <0.05 was considered significant. **Results:** There was a total of 44 myomectomies done in 2016. Thirty (n=30, 68.1%) were performed via laparoscopy, while fourteen (n=14, 31.9%) via laparotomy. Laparoscopic myomectomy had the advantages of shorter hospital stay by 1 day (1 day versus 2 days, P<0.001). There were no significant differences between the two groups in terms of blood loss (P=0.175), pregnancy outcome (P=0.709) and recurrence rate (P=0.277). **Conclusion:** Laparoscopic myomectomy is a good alternative to myomectomy via laparotomy. It has the advantage of a shorter hospital stay, without increasing the risk of adverse outcomes.

The Prevalence of Female Sexual Dysfunction among Women with Infertility

Asairinachan A, Gunasekaran V, Thiagarajan RJ, Dulasi M

Department of Obstetrics and Gynaecology, Hospital Seberang Jaya, Seberang Perai Tengah, Pulau Pinang, Malaysia

ABSTRACT

Background: Sexual function – the way the body reacts in different stages of the sexual response cycle is an important component of physical and mental health. Female sexual dysfunction (FSD) – defined as a disorder of sexual desire, orgasm, arousal and sexual pain is a highly prevalent and often underestimated problem that results in significant personal distress. Studies have found that sexual concerns were more common in infertile women. The likelihood of FSD in infertile women is an important link that is not fully addressed in our population. **Objective:** The purpose of this study was to explore FSD further, to determine the prevalence of FSD among patients with infertility, and to identify important risk factors that may lead to this problem. **Methodology:** This is a prospective, cross sectional, questionnaire-based study. 84 patients with a history of infertility reviewed in the specialist clinic were recruited from April 2017 to May 2017. Participants were given a self-administered questionnaire in 2 parts – sociodemographic, and the validated Malay-version Female Sexual Function Index (MVFSFI). Results from the sociodemographic questionnaire were run through SPSS version 22 to identify significant risk factors, and MVFSFI scores were used to diagnose FSD itself. **Results:** The majority of participants were between the ages of 30-39 years old, with a mean age of 33.0 years, predominantly Malay, in the middle income group. The prevalence of FSD among women with infertility was 27.3%, comparable to results from previous local studies. FSD was found to be more common among women with primary compared to secondary infertility. Lubrication was the strongest domain involved, closely followed by satisfaction and orgasm, with a prevalence of 87%, 82% and 39% respectively. Women or their spouses above the age of 40 were found to be significant contributing factors. **Conclusion:** FSD is an important issue, affecting 1 in 4 women in our study population. Much research is needed to further determine its significance as a cause or effect of infertility.

Accuracy of Frozen Section in comparison to Full Histology in Endometrial Carcinoma: Initial Experience in the Gynaecological Oncology Unit, Hospital Tengku Ampuan Afzan, Kuantan

Ikram MR, MD¹, Ong N, MRCOG¹, Zakaria AR, M.ObGyn¹, Mat-Ali N, M.Med (O&G)¹, Arfahiza S, M.Path², Azlina AR, M.Path²

¹Gynaecological Oncology Unit, Department of Obstetrics and Gynaecology, Hospital Tengku Ampuan Afzan, Kuantan, ²Department of Pathology, Hospital Tengku Ampuan Afzan, Kuantan

ABSTRACT

Introduction: In endometrial cancer, the depth of myometrial invasion (DOI) is the single most important determinant of nodal spread and disease recurrence. Thus, the ability to determine accurately the DOI will help us to decide on how extensive the surgical staging is going to be. **Objective:** The objective of this preliminary study is to evaluate the accuracy of frozen section in determining the DOI as compared to the full histology. Besides that, we are also evaluating the accuracy of frozen section in determining the cervical stromal invasion. **Materials and Methods:** For all the cases of endometrial carcinoma undergoing surgery, the hysterectomy specimens were sent for intra-operative frozen section evaluation. We reviewed all the intra-operative frozen results and compared it with their corresponding full histology. **Results:** We have a total of 14 cases of endometrial cancer in which intra-operative frozen section were performed. If the depth of myometrial invasion (DOI) reported as more or less than 50%, the positive predictive value (PPV) of a frozen section is 100.0% with the negative predictive value (NPV) of 77.8%. If the DOI of less than 50% further subdivided into less than 50% or no invasion, the PPV drop down to 71.4% with the NPV of only 50%. We also look at the cervical stromal invasion on frozen section and the PPV for cervical stromal invasion is 100% with a NPV of 76.9%. **Conclusion:** The intra-operative frozen section has a reasonably good PPV and NPV to predict the DOI and cervical stromal invasion in endometrial carcinoma. In the centre where the facility for frozen section is available, it should be part of the assessment in women with endometrial carcinoma and the result should be used as guide to determine the extent of surgical staging.

Our experience in Frozen-thawed Embryo transfer cycles: The Impact of different post-thawed Vitrified Embryo Culture Period

Azantee Yaw¹, Roszaman R2, Siti KMB¹, Hayati MY¹, Rabiyyatun A²

¹Department of Obstetrics and Gynaecology (O&G), Kulliyah of Medicine, International Islamic University Malaysia (IIUM),

²IIUM Fertility Centre, IIUM Specialist Medical Centre, Kulliyah of Medicine, International Islamic University Malaysia (IIUM)

ABSTRACT

Vitrification technique has shown great promise for human embryo cryopreservation due to its consistent cryosurvival. The selection of medium and period of post-thawed culture for embryos survival depends on IVF laboratories practice in order to achieve successful pregnancies. The purpose of this study is to determine the influence of post-thawed vitrified embryo of different culture period and the outcome of frozen-thaw embryo transfer (FET) cycles. A total of 28 frozen embryo transfer (FET) cycles were conducted at IIUM Fertility Centre, Kuantan, Pahang, Malaysia. The frozen-thaw vitrified embryos were divided into two groups: short culture (<5 hours) and long culture (overnight culture). Eight pregnancies achieved in long culture whereas no pregnancies occurred in short culture. Out of these pregnancies, one had triplet, two twins and others were single babies. As for embryo grade, there were no difference on the clinical outcome. Our results showed that long culture for post-thawed vitrified embryos is more suitable in achieving successful clinical pregnancies.

Challenge in Surgical Management of Cervical Atresia in the Patient with Fibrodysplasia Ossificans Progressiva

Prof Noor Azmi bin Mat Adenan, Prof Si Lay Khaing, Dr Nurezwana binti Elias, Dr Htike Htike San

University of Malaya

ABSTRACT

Introduction: Fibrodysplasia ossificans progressiva (FOP) is a severely disabling heritable disorder of connective tissue characterized by progressive heterotopic ossification that forms normal bone in characteristic extra-skeletal sites. The prevalence is approximately 1/2,000,000. Children who have FOP appear normal at birth except for congenital malformations of the great toes. Trauma or stress will transform skeletal muscles, tendons, ligaments, fascia, and aponeuroses into heterotopic bone, rendering movement impossible. Cervical agenesis represents about 3% of all uterine anomalies. It is estimated that only 4.8% of women with cervical agenesis have a functioning uterus. We describe a case report of cervical agenesis with functioning uterus that presented in 15 years old with underlying FOP; a combination of rare diseases. **Case Description:** A 15-year-old girl with ACVR1 mutation, was referred from genetic clinic for further investigation for primary amenorrhoea. She complained of 6 months cyclical abdominal pain. Examination revealed her secondary sexual characteristics are well formed. A pelvic mass with size of 18-week uterus was palpable. Ultrasound pelvis and MRI pelvis showed a bicornuate bicollis uterus with hematometra. Left fallopian tube was enlarged with hematosalpinx. No evidence of hematocolpos or vaginal septum was seen. Perineum and vagina examination and hysteroscopy was performed under sedation as there is difficulty in obtaining regional anaesthesia as her spine was severely malformed with extra-skeleton bone. It was challenging for anaesthetist as the patient had a restrictive lung function. Vagina was normal with no septum. The cervix appeared normal, however there is no communication between cervix and uterine corpus. A biopsy was taken and confirmed squamous cell from ectocervix. **Conclusion:** FOP is the severe form of genetic disease and surgical management is challenging. Cervical atresia is curable with operative management, but patient's underlying medical condition, retaining of fertility should be considered before embarking on any operations especially in this case.

Colpocleisis: Is it still a Viable Option?

Goh YP, Abdullah B, Md Latar IL, Khong SY

University of Malaya Medical Centre

ABSTRACT

Introduction: LeFort colpocleisis is a well-established surgical procedure for treatment of advanced pelvic organ prolapse (POP), particularly for those who are frail and do not wish to conserve their sexual function. Over the recent years, LeFort colpocleisis may have lost its popularity with the development of novel techniques such as transvaginal placement of mesh and laparoscopic sacrocolpopexy. The aim of these case studies are to demonstrate that LeFort colpocleisis remains a viable surgical option in a carefully selected group of women. **Case Studies:** Case A, a 63-year-old Para 4 with previous vaginal hysterectomy for prolapse, presented with stage 4 vault prolapse. Case B, a 67 years old Para 4, presented with stage 4 POP involving all 3 compartments. Ring pessaries had failed to reduce these POP and these women subsequently developed decubitus ulcers. Attempts to reduce the oedematous POP failed despite vaginal packing as inpatients. Biopsies were taken to exclude malignancy as the decubitus ulcers were slow healing. Of note, both cases had underlying hypertension with poorly controlled diabetes and did not wish to conserve vaginal sexual function, hence LeFort colpocleisis was performed. Both surgeries were uncomplicated intra- and post-operatively. Both patients were asymptomatic of POP when reviewed at 6 weeks postoperatively. **Discussion:** These case studies demonstrate that LeFort colpocleisis remain a good option for treatment of advanced POP in women with and without uterus. However, for those with uterus, uterine and cervical pathology must be excluded prior to surgery. Both cases were huge procidentias involving all 3 compartments which implied failure of all three levels of pelvic floor support. Failure to retain ring pessary and vaginal packing resulted from downward pressure of grossly oedematous tissue in the presence of a widened genital hiatus. A trial of oestrogen-soaked vaginal packing was to facilitate healing of decubitus ulcer. However, when ulcers of the genital tract do not heal, it is essential to exclude malignancy. LeFort colpocleisis has been shown to have high success rate and minimal complications in many studies in treating similarly advanced POP. Thorough counselling regarding the nature of the surgery and its implications particularly with regard to loss of sexual function is paramount. Decision not to perform a concurrent vaginal hysterectomy in Case B was to reduce the risk of ureteric injury and blood loss once endometrial pathology was excluded.

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Ovarian Tumour Metastasized from Pulmonary Blastoma: An Extremely Rare Entity

Si Lay Khaing¹, Syeda Nureena Zaidi, Jesrine Hong Gek Shan, Teoh Kean Hooi², Pailoor Jayalakshmi², Siti Zawiah Omar¹

¹Department of Obstetrics & Gynaecology, ²Department of Pathology, Faculty of Medicine, University of Malaya, 50603 Kuala Lumpur, Malaysia

ABSTRACT

Objective: To report the extremely rare case of ovarian tumour metastasized from Pulmonary Blastoma. **Case Report:** Miss YCL, 22 years old, single, Chinese lady, was referred to Respiratory unit of University Malaya Medical Centre (UMMC) in March 2017 for further management of large lobulated right pleural effusion. She presented with right sided chest pain, chronic cough for 3 months associated with haemoptysis for 3 weeks. CT thorax showed a well circumscribed mass at right lower lobe. CT guided biopsy showed features suggestive of pulmonary blastoma. PET scan for staging on 19th April 2017 reported a mass at right lower lobe with no lymphadenopathy, no skeletal, liver, pancreas and spleen metastasis. The uterus was normal and no mass noted in pelvis. She underwent right lobectomy on 27th April 2017. HPE showed biphasic pulmonary blastoma with clear margins. She was planned for chemotherapy. However, just two weeks after lobectomy, she presented to UMMC with abdominal distension, suprapubic pain and vomiting for one week. The pelvic mass was palpable about 16 weeks size. Urine pregnancy test was negative. Tumour markers were normal. CT scan showed a complex, heterogeneous pelvic mass 9.0x9.2x8.5 cm compressing the uterus and bladder. The sigmoid colon was displaced to the right. Right lung showed post resection with residual tumour, right pleural effusion and right pleural base nodule. In Gynae ward, she experienced shoulder tip pain with lowering her haemoglobin level. She underwent midline laparotomy on 18th May 2017. Intraoperatively, haemorrhagic left ovarian tumour measuring 8x10 cm and haemoperitoneum about 500 mls was found. Tumour adhered to POD and omentum. Uterus, right ovary and both tubes were appeared normal. Left salpingo-oophorectomy, omentectomy, right ovarian biopsy and left pelvic lymph node dissection were performed. Histology reported as metastatic pulmonary blastoma of left ovary and omentum. Biopsy from right ovary and left pelvic lymph node showed no malignancy. She was referred back to primary team for further management. **Discussion:** Pulmonary blastoma is a rare and very aggressive lung cancer. This is an extremely rare case of ovary metastasized from Pulmonary blastoma. To our knowledge, this is the second case report of ovarian metastasis from Pulmonary blastoma after Lin Yu et al from China in 2009. Previous PET scan showed no pelvic metastasis but with in short duration she developed symptomatic ovarian metastasis. Histopathological evaluation is of great value in differentiating primary ovarian tumour from metastatic tumour for successful further management of the primary disease.

Chronic Thromboembolic Pulmonary Hypertension (CTEPH) a Rare Cause of Death in a Woman with Stage 1B Cervical Cancer

Raelene YM Tan¹, Zatul Akmar², Rozita Malek², Pang Yong Kek, Woo Yin Ling²

¹Monash University, Australia, ²Faculty of Medicine, University of Malaya

ABSTRACT

Introduction: Chronic thromboembolic pulmonary hypertension (CTEPH) is a rare form of severe pulmonary hypertension. Potentially fatal unless recognised and treated early, it is caused by the chronic occlusion of pulmonary arteries by micro thromboembolic material, ultimately leading to right heart failure. It is typically preceded by an acute thromboembolic event, although this is not always the case. Coupled with the non-specific nature of its symptoms (exertional dyspnoea, fatigue, angina), as well as a lack of awareness amongst the medical community regarding this disease, CTEPH is often misdiagnosed. **Case Description:** A previously well 40-year-old Chinese lady with no history of cardiopulmonary disease was admitted for treatment of a stage IB large cell non-keratinising squamous cell cervical carcinoma. She had an excellent response to radical radiotherapy clinically and radiologically. After the second fraction, she started to experience exertional dyspnoea. A CT pulmonary angiogram (CTPA) showed no evidence of pulmonary embolism (PE), but she was treated empirically for it as well as for a chest infection, and her symptoms improved. Similar episodes occurred intermittently throughout the remaining fractions, however these resolved spontaneously without treatment. Upon successful completion of brachytherapy, she moved overseas, whereby she was reported to have increasingly limited mobility due to persistent exertional dyspnoea (New York Heart Association functional class III – IV). Shortly after her move, she developed an acute attack of shortness of breath and required a hospital admission, where she was investigated for PE yet again. As before, the CTPA returned negative for PE, but she received empirical treatment for a PE and a chest infection. Despite this, she did not improve, and was urgently transferred back to Malaysia for further treatment due to financial reasons. Here, she was reviewed by a pulmonary physician who, based on clinical findings and an echocardiogram, strongly suspected CTEPH. Nonetheless, she deteriorated rapidly, and died of cardiopulmonary failure a few hours later. **Conclusion:** CTEPH is a serious disease requiring early identification and prevention. It is essential that clinicians have a high index of suspicion for CTEPH based on history and clinical examination findings, as there exists potentially curative medical and surgical therapeutic options for CTEPH. Furthermore, it is important to note from this case report that a negative CTPA does not exclude CTEPH. Instead, ventilation/perfusion scintigraphy should be used, as the literature shows that it is the preferred imaging modality for the exclusion of CTEPH.