

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

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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

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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