

# Masterclasses

**M7.2****Massive Primary Postpartum Haemorrhage****16:15 Theatre 2****Second Line Therapies – Balloon Tamponade, Compression Sutures and Others***Lau WL**Department of Obstetrics and Gynaecology, Kwong Wah Hospital, Hong Kong*

Postpartum haemorrhage (PPH) is an obstetrical emergency and remains a major cause of maternal morbidity and mortality. Early use of second line therapies could reduce blood transfusions, hysterectomies, admissions to intensive care units, and maternal deaths. Second line therapies include compression sutures, balloon tamponade and uterine artery embolisation.

B-lynch brace compression suture or its modification is effective in controlling bleeding due to uterine atony. Hwu's stitches (two vertical compression sutures at lower segment) are useful to control bleeding due to placenta praevia/accreta. Balloon tamponade is effective in controlling bleeding due to uterine atony or placenta praevia. Uterine artery embolisation performed by intervention radiologist could be employed either for placenta accreta/percreta prophylactically or in case of failed balloon tamponade/compression sutures on emergency basis. Furthermore, various combinations of these second therapies have been proposed. Early recognition of maternal deterioration is critical to initiate active resuscitation. For example, Obstetric Shock Index (OSI) more than 1, measured at 10 minutes and 30 minutes after the onset of postpartum bleeding could be a useful indicator in estimating blood loss in cases of massive PPH, and in predicting the need for blood transfusion. The OSI was calculated as pulse rate divided by systolic blood pressure. One should be aware of the potential pitfall in the presence of maternal fever or pre-eclampsia. Close monitoring with regular assessment after application of second line therapies is essential to detect any on-going bleeding. We should be prepared for definitive interventions promptly when second therapies failed to arrest the bleeding. Active involvement of consultant, multi-disciplinary team approach and massive transfusion protocol are pivotal to the management of massive PPH. Regular drills and workshops are essential in the dissemination of knowledge, skills and attitude.