OP19.03 – Evaluation of the risk of intraoperative complications in women with placenta previa using the PAS staging system: an external validation study

Andrea Dall’Asta¹², Francesco D’Antonio ³, Serena Girardelli⁴, Francesco Forlani⁵, Amarnath Bhide⁶, Giuseppe Calì⁵, Christoph Lees¹
¹. Queen Charlotte’s and Chelsea Hospital, Imperial College London, United Kingdom. 2. Department of Medicine and Surgery, Obstetrics and Gynecology Unit, University of Parma, Parma, Italy. 3. Fetal Me, UiT, University of Northern Norway, Tromsø, Norway. 4. Ostetricia e Ginecologia, Università Vita e Salute San Raffaele, Milan, Italy. 5. Dipartimento materno infantile UOC Ginecologia e Ostetricia ARNAS Civico Palermo, Bagheria, Italy. 6. Fetal Medicine Unit, St George’s Hospital, London, United Kingdom

Objectives
A recently developed staging system based on prenatal ultrasound (US) has been suggested for the antenatal risk stratification of surgical outcome in women with placenta accrete spectrum (PAS). The aim of this study was to externally validate this staging system by evaluating a cohort of women at risk of PAS submitted to expert prenatal ultrasound.

Methods
Database study conducted at a tertiary Fetal Medicine unit. Only cases with confirmed placenta previa were included. In all cases the placenta was evaluated in a systematic fashion with two-dimensional (2D) US combined with Color and/or Power Doppler while three-dimensional (3D) ultrasound and magnetic resonance imaging (MRI) were performed at discretion of the examiner or after multidisciplinary team discussion. PAS was subclassified in PAS0-PAS3 according to a recently developed US based scoring system evaluating the loss of clear zone, placental lacunae, bladder wall interruption, uterovesical hypervascularity and increased vascularity in the parametrial region.

Results:
Forty-three cases were included, of whom 33 with major placenta previa. 31 cases were categorized as PAS 0, while PAS 1, PAS 2 and PAS 3 accounted for 3, 4 and 5 cases respectively. All women were submitted to caesarean section and hysterectomy was required in 10. The comparison of the perinatal outcomes among the PAS categories yielded significantly greater operative time and estimated blood loss for the highest PAS categories (p 0.001 for both) which were also associated with a significantly higher rate of hysterectomy (p = 0.001) intraoperative or postoperative transfusion (p 0.002) post-surgical admission to ITU or HDU (p=0.001) and also associated with longer postoperative admission (p 0.02).

Results:
The PAS scoring system retains its performance on external validation in the hands of ultrasound examiners with expertise in the evaluation of women at risk of abnormally invasive placenta.