OC09: ABNORMALLY INVASIVE PLACENTA

OC09.01
Outcome analysis in 133 cases of surgery confirmed cases of abnormally invasive placenta (AIP): do ultrasound descriptors of AIP predict prognosis?

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Objectives: Abnormally invasive placenta (AIP) has become a worldwide concern. We wished to determine whether ultrasound descriptors also played a role in the prediction of prognosis for AIP.

Methods: We carried a retrospective review for those cases of placenta previa totalis with the suspicion of AIP during the period between Feb 2002 and Feb 2018. Exclusion criteria were failure to complete follow-up and the operation was taken before the third trimester. In those enrolled cases, a targeted scanning was directed towards the colour flow signals between the placenta and bladder mucosa. In addition to those ultrasound descriptors described by Ad-hoc International AIP and EW-AIP expert groups, we disclosed the novel ‘rail sign’ by colour Doppler ultrasound. The positive ‘rail sign’ was defined as two parallel flow signals appearing in the subplacental and bladder mucosa regions with interconnected bridging vessels perpendicular to them.

Results: Totally 133 consecutive cases of AIP were enrolled during Caesarean section in the third trimester. Among them, 72 patients were positive for rail sign. Those patients with positive rail sign were prone to have a severe extent of AIP (eg. placenta increta or percreta) (n<0.001). The most significant difference is patients with positive rail sign had a higher chance of hysterectomy and blood transfusion (n<0.001). In addition, patients with positive rail sign also had a higher likelihood of bladder invasion and ICU admission (n=0.05). The blood loss for patients with positive rail sign is significant higher than rail sign (-) patients (n=0.001). The mean gestational week of delivery for patients with positive rail sign was also earlier than those patients without rail sign.

Conclusions: Rail sign identified by colour Doppler ultrasound may distinguish AIP from mild AIP and predicts higher morbidity. Ultrasound descriptors do matter not only for diagnosis, but also for outcome prediction and probably surgical planning.

OC09.02
Outcome analysis in 133 cases of surgery confirmed cases of abnormally invasive placenta (AIP): do ultrasound descriptors of AIP predict prognosis?

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Objectives: The purpose of this study was to explore the clinical value of CEUS in evaluating the effect of uterine artery embolisation (UAE) treatment in morbidly adherent placenta after delivery.

Methods: Twenty two cases of morbidly adherent placenta accreta after delivery were examined by gray-scale ultrasound, colour Doppler ultrasound, and CEUS. All the patients undergone UAE combining with Methotrexate (MTX) and were followed up by CEUS. The images of the CEUS before and after UAE were compared.

Results: The time that the enhancement began before UAE in the lesion was earlier than that in the myometrium, p=0.007. The duration of enhancement before UAE in the lesion was longer than that in the myometrium, p=0.000. The PI and the lesion before UAE was higher than that of the normal myometrium, p=0.000. The lesion displayed hyper enhancement before UAE. The lesion displayed nonenhancement in 18 cases and isoenhancement in 4 cases after UAE. The 18 cases of nonenhancement expelled the placenta by dilation and curettage (D&C) completely 7 days after UAE, and the 4 cases of isoenhancement expelled part of the placenta by D&C and hysteroscope were performed 30 days after UAE.

Conclusions: CEUS may be a useful tool for the quantitative assessment of uteroplacental vascularity in morbidly adherent placenta after delivery and may be used to follow up the conservative treatment.

OC09.04
Diagnosis of placenta accreta starts at first trimester: is it resource intensive?

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Objectives: Assessment of lower segment uterine scar by transvaginal ultrasound (TVUS) at 11-14 weeks to screen for placenta accreta (PA).

Methods: Patients with history of Caesarean section (CS) were prospectively included during first trimester scan over 6 weeks. Lower uterine segment was assessed using TVUS to identify CS scar. A TV mid-sagittal plane was defined including cervical glandular area, anterior vaginal wall, proximal and distal bladder wall with pubocervical fascia and gestational sac. Both CS scar and location of placenta were recognised. Once scar seen, location was described either within or outside cervicoisthmic canal (CIC) above the internal os. Scar was classified as dehiscent if wide hypoechoic defect greater than 2mm or thin when present as linear defect. When CS scar was dehiscent, 3 measurements were taken in sagittal plane, width, depth of scar and residual myometrial thickness. Four groups were defined: type 1A, thin and within CIC; type 1B, thin and above CIC; type 2A, dehiscent and within CIC; and type 2B, dehiscent and above CIC. A patient was considered high-risk when scar was exposed above CIC (1B & 2B) with a covering low-lying placenta. A patient was low risk either when scar was protected within cervical canal or placenta was not covering internal os. Scar was classified as dehiscent if wide hypoechoic defect greater than 2mm or thin when present as linear defect. When CS scar was dehiscent, 3 measurements were taken in sagittal plane, width, depth of scar and residual myometrial thickness. Four groups were defined: type 1A, thin and within CIC; type 1B, thin and above CIC; type 2A, dehiscent and within CIC; and type 2B, dehiscent and above CIC. A patient was considered high-risk when scar was exposed above CIC (1B & 2B) with a covering low-lying placenta. A patient was low risk either when scar was protected within cervical canal or placenta was not covering internal os.

Results: Over pilot study period, 888 women attended at 11-14 weeks and 83(9.3%) had history of CS. They were offered scar assessment by TVUS, 71 (85.5%) agreed. Scar was visualised in 76% (54/71). There were 19 (35.2%) with a thin scar (type 1); 18 were type 1A and 1 was type 1B. Rest 35 (64.8%) had dehiscent scar, including 33 Type 2A and 2 type 2B. The concurrent finding of an exposed scar above internal os and an overlapping placenta was found in only 1/54 (1.8%) of the study population who would require follow up for placenta accreta.

Supporting information can be found in the online version of this abstract