Antenatal diagnosis of Placenta Accreta Spectrum in a tertiary referral centre

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Background:

The rate of Placenta Accreta Spectrum (PAS) is rising as increased rates of caesarean sections are observed. PAS is associated with a high risk of maternal morbidity and mortality. In the absence of antenatal diagnosis these risks are substantially increased. The aim of this study was to establish the accuracy of radiological antenatal diagnosis within our tertiary referral center.

Methods:

Case records were reviewed for all patients with a diagnosis of PAS over a 12 month period, from July 2019 to June 2020. Maternal demographics, obstetric history, radiological data, surgical findings and histopathology results were recorded.

Results:

Seven cases met the inclusion criteria. Antenatal diagnosis occurred in all cases of operative diagnosis of PAS. All cases had a history of caesarean section, and five cases had a history of dilation and curettage. Gestation at antenatal diagnosis varied from 13 to 32 weeks' gestation. All cases had placenta praevia. All US were reported by a single subspecialist, and five of the MRIs performed were reported by a single subspecialist. All women who underwent hysterectomy had histological evidence of PAS.

The accuracy of ultrasound (US) in grading PAS was 71% (5/7). Magnetic resonance imaging (MRI) was performed as an adjunct in six cases. MRI confirmed the correct histopathological diagnosis in 66% cases (4/6). US diagnosis of PAS (increta) was incorrect in one case, and ultimately not confirmed operatively or with histology. MRI was not performed in this instance. In one case, both US and MRI reported a higher grade of PAS than was found on histopathology. MRI incorrectly graded one case of PAS, that US correctly identified as percreta (and was confirmed during surgery and with histopathology).

Discussion:

Dedicated obstetric ultrasound remains the preferred modality for the antenatal diagnosis of PAS, however, may overstate the diagnosis. MRI did not improve the antenatal diagnosis of PAS in our unit.

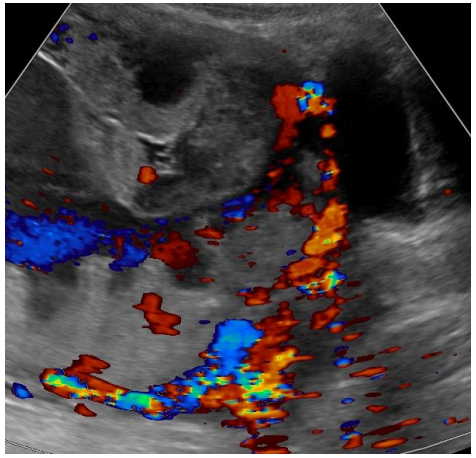

Table 1: Summary of radiological, operative and histopathological diagnosis

Case	US	MRI	Operative	Histopathology
1	Placenta increta	Placenta increta	Placenta accreta	Placenta increta
2	Placenta percreta	Placenta percreta	Placenta accreta	Placenta accreta
3	Placenta percreta	Placenta increta	Placenta percreta	Placenta percreta
4	Placenta percreta	Placenta percreta	Placenta percreta	Placenta percreta
5	Placenta percreta	Placenta percreta	Placenta percreta	Placenta percreta
6	Placenta percreta	Placenta percreta	Placenta percreta	Placenta percreta
7	Placenta increta	NA	No evidence of PAS	Placenta: No abnormality

US: Ultrasound; MRI: Magnetic Resonance Imaging; PAS: Placenta accreta spectrum; NA: Not applicable