

EP14.42 Performance of antenatal ultrasound and MRI diagnosis of severe placenta accreta spectrum disorders

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Objectives:

Severe placenta accreta spectrum (PAS) often necessitates a complex cesarean hysterectomy (CH). Therefore an accurate antenatal assessment of invasion is essential. This study evaluated the performance of ultrasound (US) and magnetic resonance imaging (MRI) in severe PAS, and their correlation with intraoperative findings.

Methods:

Retrospective single-center observational study including all CH cases for severe PAS during 2018–2025. Antenatal ultrasound (Cali et al.) and MRI findings were compared with intraoperative FIGO staging. US and MRI were treated as ordinal variables and Spearman's rank correlations were calculated to assess the correlation with intraoperative FIGO stage. A combined heatmap illustrates data distribution (Figure1).

Results:

Ultrasound showed a moderate association with the intraoperative stage. Most PAS 3 cases corresponded to FIGO 3b–3d, while PAS 2 cases were mainly FIGO 3a–3b. MRI staging showed clearer gradation with surgical severity: placenta accreta was largely FIGO 2–3b, whereas placenta percreta was mostly FIGO 3c–3d. Spearman correlation was $r = 0.43$ ($p = 0.019$) for US and $r = 0.36$ ($p = 0.053$) for MRI.

Conclusions:

Overall, ultrasound showed slightly better correlation with the intraoperative findings. MRI also showed a positive correlation, though weaker and not reaching statistical significance.

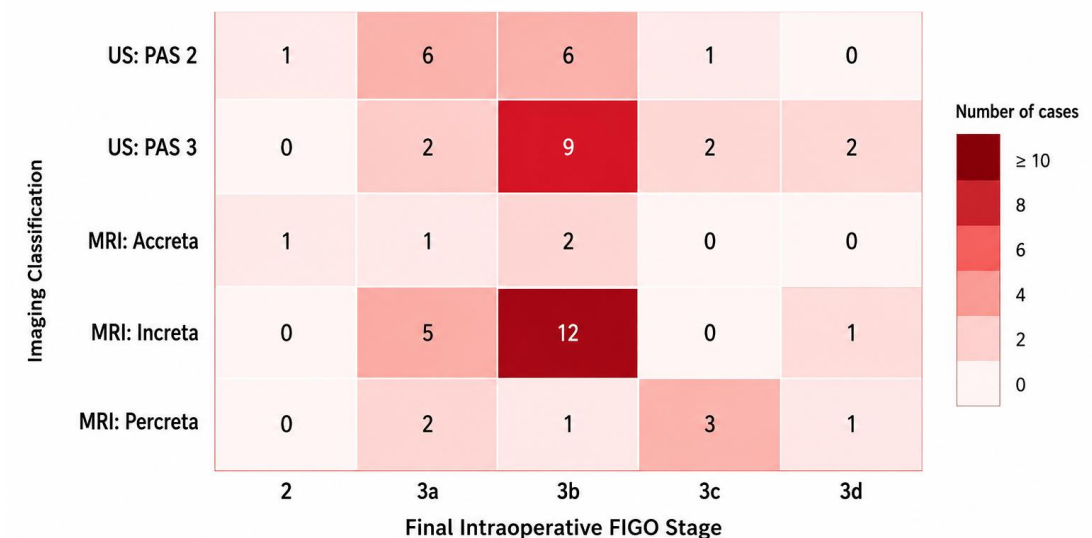


Figure 1: Combined heatmap of ultrasound and MRI classification vs final FIGO staging