

Placenta Accreta Spectrum Diagnosed on Histopathology Increases the Risk of Secondary Postpartum Hemorrhage

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Background

- While Placenta Accreta Spectrum (PAS) is generally diagnosed clinically, it can also be diagnosed microscopically on pathology
- Conservative management of clinical PAS can lead to secondary PPH
- There is a lack of evidence to guide management after pathology shows unexpected PAS

Objective

To determine the risk of secondary PPH requiring readmission or surgery in patients with PAS on pathology as compared to those without this pathologic finding.

Methods

- Retrospective cohort study of all patients > 20 weeks gestation who underwent placental pathology between 1/1/2014 – 1/1/2020.
- Exposure defined as presence of PAS on placental pathology without clinical evidence of PAS at delivery
- Unexposed group randomly selected from patients without PAS on pathology
- Primary outcome was readmission or return to surgery for secondary PPH
- Covariates included maternal age, race, parity, prior curettage and cesarean delivery
- A multivariate logistic regression was performed

Placenta Accreta Spectrum diagnosed on placental pathology is associated with an increased risk of secondary postpartum hemorrhage requiring readmission or return to surgery.



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Results

- Total of 1838 subjects: 919 with PAS and 919 without PAS on pathology
- Secondary PPH requiring readmission or return to surgery occurred in 31 subjects and was more likely in the PAS group compared to the non-PAS group (OR 6.92; 95% CI 2.52, 19.02). (Table 1)
- Logistic regression model incorporating confounders (Table 2) showed that PAS remained significantly associated with secondary PPH (aOR 6.85, 95% CI 2.36, 19.89).

Conclusion

- Patients with PAS on pathology are more likely to have secondary PPH with readmission or surgery
- This can help guide clinical management and patient counseling after pathology shows PAS

Table 1. Primary Outcome in the PAS Exposure Groups

	Secondary PPH	No Secondary PPH	P value
PAS	27 (2.9%)	892 (97.1%)	< 0.001
Non-PAS	4 (0.4%)	915 (99.6%)	

Table 2. Characteristics of PAS and Non-PAS Groups

	PAS (n=919)	Non-PAS (n=919)	P value
Age (years)	31.3 +/- 5.4	29.1 +/- 5.8	<0.001
White Race	626 (69.9%)	576 (64.2%)	0.011
Nulliparity	420 (45.7%)	469 (51%)	0.022
Prior Curettage	154 (1.7%)	104 (1.1%)	0.001
Multiples	81 (8.8%)	56 (6.1%)	0.026
Placenta Previa	24 (0.26%)	6 (0.06%)	0.001
Preeclampsia	207 (22.5%)	171 (18.6%)	0.038
Cesarean delivery	453 (49.3%)	360 (39.2%)	<0.001