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Case Report

Beyond the immediate postpartum - scar niche associated placenta accreta spectrum presenting as chronic AUB

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ABSTRACT

Placenta accreta spectrum (PAS) is typically diagnosed during pregnancy or in the immediate postpartum period. Delayed presentation years after delivery is exceedingly rare and may mimic chronic abnormal uterine bleeding (AUB), resulting in diagnostic difficulty. We report the case of a multiparous woman with three previous caesarean deliveries who presented with persistent abnormal uterine bleeding (AUB) for two years following her last childbirth. She had been repeatedly managed as a case of unexplained AUB with limited response to medical therapy. Transvaginal ultrasonography revealed a heterogenous lesion within a caesarean scar niche associated with myometrial thinning, scar dehiscence, and focal vascularity, raising suspicion for chronic retained products of conception with invasive placental tissue. Diagnostic hysterolaparoscopy revealed dense bladder adhesions and a hypervascular lower uterine segment lesion with significant intraoperative bleeding, necessitating conversion to total laparoscopic hysterectomy. Histopathological examination confirmed placenta accreta and placenta percreta associated with retained products of conception within a caesarean scar niche. This case highlights that chronic AUB in women with multiple prior caesarean deliveries may rarely be associated with retained invasive placental tissue within a caesarean scar niche.

Keywords: Placenta accreta spectrum, Retained products of conception, Cesarean scar niche, Chronic AUB

INTRODUCTION

Placenta accreta spectrum (PAS) refers to abnormal adherence of placental villi to the myometrium, representing a spectrum from accreta to percreta. The incidence of PAS has increased substantially over recent decades, largely paralleling the rising rate of caesarean deliveries. PAS is most commonly diagnosed antenatally or presents in the immediate postpartum period with massive obstetric hemorrhage.^{1,2} However, a distinct and rare clinical entity delayed presentation of PAS has been described in the literature. In such instances, retained invasive placental tissue embedded within a caesarean scar niche may persist for months or even years post-delivery, manifesting as chronic, refractory abnormal uterine bleeding (AUB).^{3,4} Given that these patients are far removed from their last obstetric episode, clinical

suspicion for PAS is typically very low, leading to prolonged diagnostic delays and repeated unsuccessful medical management. We report a rare case of chronic refractory AUB presenting two years after caesarean delivery in which histopathology confirmed placenta accreta and percreta associated with retained products of conception.

CASE REPORT

A woman in her late 30s, para 3 living 3 (P3L3), presented with complaints of excessive menstrual bleeding associated with frequent intermenstrual spotting for the preceding two years following her last childbirth. Obstetric history was significant for three prior lower-segment caesarean sections, none of which were complicated by postpartum hemorrhage or required blood transfusion,

highlighting the insidious and delayed presentation of the current pathology. Prior to her last pregnancy, she had regular menstrual cycles. The patient had been evaluated at multiple centers and was repeatedly treated as a case of unexplained AUB with various hormonal therapies and antifibrinolytics, without sustained symptomatic relief. There was no history of pelvic pain or fever. Urine pregnancy test at presentation was negative, with serum beta-hCG < 5 mIU/ml. On physical examination, the patient was hemodynamically stable. Bimanual examination revealed an enlarged, 10-week-sized uterus that was anteverted and mildly restricted in mobility. Transvaginal ultrasonography revealed a well-defined hyperechoic lesion (approx. 15 mm) with internal cystic and calcific changes located within the lower uterine segment, specifically extending through a caesarean scar niche. The lesion appeared to breach the uterine serosa and closely abutted the right lateral wall of the bladder. Color Doppler demonstrated focal internal vascularity with low-resistance arterial waveforms. These findings raised suspicion for chronic retained products of conception with invasive placental tissue within a caesarean scar niche. Diagnostic hysterolaparoscopy was initiated for further evaluation. Intraoperatively, on hysteroscopy vascular polyp like structure noted originating from lower part of uterus, on laparoscopy dense, fibrous adhesions were noted between the anterior uterine wall and the urinary bladder.

The lower uterine segment appeared hypervascular, with friable, anomalous tissue arising from the scar niche. Attempts at further evaluation resulted in significant hemorrhage from the lesion site. Given the refractory nature of the bleeding, dense adhesions, and the patient's completed family size, the procedure was converted to total laparoscopic hysterectomy. Histopathological examination of the uterine scar site revealed retained

placental tissue with evidence of placenta accreta and placenta percreta. Sections from the uterine defect demonstrated a through-and-through defect in the uterine wall with placental tissue extending from the endometrial surface to the outer serosal surface. Areas of infarction, dystrophic calcification, ossification, and necrosis were identified, diagnostic of chronic retained invasive placental tissue (Figure 1). The postoperative period was uneventful, and the patient remained asymptomatic at follow-up.

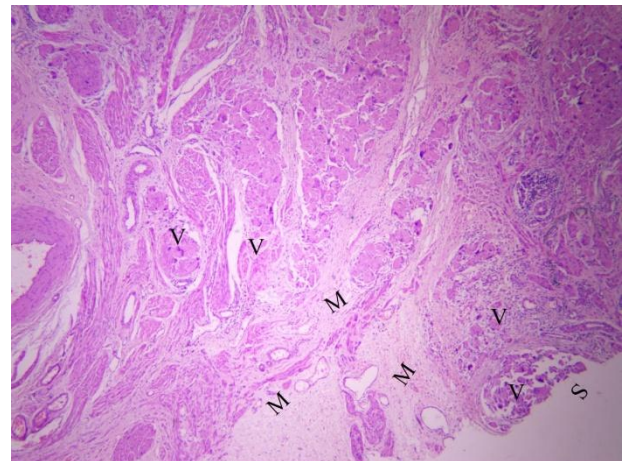


Figure 1: Histopathological examination of the uterine scar site (Hematoxylin and Eosin stain). The section demonstrates chorionic villi (V) embedded directly within the myometrium (M), showing a loss of the normal decidual interface, characteristic of placenta accreta. The presence of villi extending to the outer margin suggests focal areas of percreta (S), consistent with a scar niche-associated placenta accreta spectrum

Table 1: Clinical timeline.

Time	Clinical event
2 years prior	Third cesarean delivery with tubal ligation
Postpartum period	Persistent heavy menstrual bleeding and intermenstrual spotting
Multiple consultations	Managed medically as unexplained AUB
Current presentation	Refractory abnormal uterine bleeding evaluated further
Imaging	Cesarean scar niche lesion with vascularity and scar dehiscence identified
Surgery	Diagnostic hysterolaparoscopy converted to total laparoscopic hysterectomy
Histopathology	Placenta accreta and placenta percreta confirmed
Follow-up for 6 moths	Resolution of symptoms

Table 2: Differential diagnosis.

Potential diagnosis	Reason for exclusion
Endometrial polyps	Imaging revealed distinct lesion within the caesarean scar niche, not the endometrial cavity.
Adenomyosis	Lack of typical "myometrial cysts" or diffuse uterine enlargement consistent with adenomyosis; presence of vascularized niche lesion.

Continued.

Potential diagnosis	Reason for exclusion
Submucosal fibroids	Lesion morphology, calcification, and vascularity patterns were consistent with retained placenta, not leiomyoma.
Chronic endometritis	Persistent, focal refractory lesion with calcific changes not responsive to targeted antibiotics/hormonal therapy.
Symptomatic caesarean scar niche	Excluded by imaging, which identified a distinct heterogeneous, hypervascular mass inside the defect rather than the simple fluid-filled, anechoic pouch typical of a standard niche; definitively confirmed by histopathology.
Primary uterine arteriovenous malformation (AVM)	Doppler flow features are identical for both (high-velocity, turbulent flow), but a UAVM lacks a distinct structural mass on grey-scale ultrasound, histopathology definitively excluded it by identifying chorionic villi.
Chronic retained products of conception (RPOC)	Excluded by imaging, which showed the hypervascular mass deeply invading into the anterior myometrium (PAS) rather than being limited to the endometrial cavity/niche lumen with an intact myometrial layer. Definitive differentiation was provided by histopathology confirming anchoring chorionic villi within the muscle wall.
Gestational trophoblastic disease	Excluded by negative serum beta hCG, ruling out active or malignant trophoblastic tumors. Histopathology also lacked anaplastic cells

In conclusion, after systematically ruling out all other structural, hormonal, and vascular mimics through comprehensive imaging and laboratory testing, the definitive histopathological finding of invading chorionic villi within the anterior myometrium established a final diagnosis of caesarean scar niche-associated placenta accreta spectrum (PAS).

DISCUSSION

Placenta accreta spectrum (PAS) is a significant cause of obstetric morbidity, typically identified during pregnancy or the immediate postpartum period. Delayed presentation, occurring months or years after delivery, is an extremely uncommon clinical entity that often results in diagnostic uncertainty.^{2,3}

The pathogenesis of these delayed presentations is attributed to the incomplete separation and resorption of placental tissue abnormally adherent within a caesarean scar niche.⁴ Over time, this retained tissue undergoes chronic inflammation, focal fibrosis, dystrophic calcification, and neovascularization, manifesting clinically as persistent, refractory abnormal uterine bleeding (AUB).² While Maurer et al. demonstrated that PAS can manifest as a uterine mass following first-trimester medical abortion, and Mercier et al reported secondary postpartum hemorrhage caused by undiagnosed PAS, our case is unique due to the exceptionally long latent period of two years.^{2,3} Unlike the cases presented by Maurer et al and Mercier et al where symptoms emerged within weeks or months of the obstetric event, our patient remained symptomatic for two years, having been repeatedly managed for "unexplained AUB" without resolution.^{2,3}

Furthermore, while Mercier et al. suggest that PAS may be missed during an initial caesarean section if the lower

uterine segment is not meticulously inspected, our case highlights that even in patients who experience an uncomplicated postpartum course with no immediate hemorrhage, the "silent" retention of placental tissue can lead to chronic, refractory pathology years later. Because these patients are far removed from their last pregnancy, clinical suspicion for PAS remains low, frequently leading to prolonged diagnostic delays and repeated, unsuccessful medical interventions.³

In line with findings from both Maurer et al. and Mercier et al., imaging was the pivotal factor in our case that shifted the diagnosis from suspected unexplained AUB or retained products of conception toward the definitive diagnosis of PAS.¹ This case underscores the necessity of considering delayed scar-associated PAS in the differential diagnosis of AUB for any patient with a history of prior caesarean deliveries, regardless of the time elapsed or a negative urine pregnancy test. While conservative hysteroscopic resection is a described approach, hysterectomy remains the gold standard in cases of completed family size, extensive myometrial invasion, or significant intraoperative bleeding.⁴ This report serves as a critical clinical lesson: practitioners must maintain a high index of suspicion for scar-related PAS in any patient with a history of caesarean section presenting with refractory menstrual symptoms.

CONCLUSION

Chronic AUB in women with multiple previous caesarean deliveries may rarely be associated with retained invasive placental tissue within a caesarean scar niche. Although uncommon, this possibility should be considered in cases refractory to standard medical management. Careful imaging evaluation and individualized surgical planning are essential to achieve definitive resolution and prevent potential complications.

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