

Are Uterine Fibroids a Risk Factor for Placenta Accreta Spectrum Disorder?

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Introduction

Placenta accreta spectrum (PAS) disorders are linked to devastating maternal outcomes including massive hemorrhage, hysterectomy, and death. Recent studies suggest an incidence of 1.7 per 10,000 maternities and 544 per 10,000 in women who have had a prior cesarean delivery (CD) and placenta previa¹. Known major risk factors are advanced maternal age, two or more CD, placenta previa, previous uterine surgery, or IVF pregnancy¹. However, some PAS cases are not associated with any known risk factors. We describe a case of unexpected focal accreta during elective CD.

Case Description

A 34 year old healthy G1P0 at 39 weeks presented for elective CD for maternal request due to concern for fibroids. Her pregnancy was complicated by subchorionic hemorrhage, first trimester vaginal bleeding, a stable 9 cm posterior lower uterine segment fibroid, and a 3 cm anterior fibroid. The placenta was anterior.

She had no history of myomectomy or other uterine surgery. All laboratory values were within normal limits. The patient received uncomplicated spinal anesthesia. Delivery was uneventful but the placenta did not separate with traction and a large amount of bleeding occurred . Intraoperative examination revealed a small portion of the placenta was adherent to the fundus and was removed manually. Post-extraction, the uterus had moderate atony, which was treated with additional oxytocin and methylergonovine.

Case Description (continued)

The patient became hemodynamically compromised and general anesthesia was administered. Uterine tone improved after administration of uterotonics, yet bleeding persisted from a 2cm defect at the right cornua suspicious for focal placenta accreta.

Labs were drawn, and a second IV and a radial arterial line were placed. The patient was resuscitated with: 4u PRBC, 4u FFP, 1u platelet, 1g fibrinogen concentrate, 500 ml albumin, and 4 L of crystalloid. Hemostasis was obtained after two absorbable compression sutures were placed over the area of the uterine defect. At the end of the case the patient was hemodynamically stable with Hct 25.6, plt 155, fibrinogen 239, and INR 1.2. Quantitative blood loss was 3,550 mL. Due to receiving large volume resuscitation, the patient remained intubated and was transported to the ICU for postpartum care and monitoring and had an uneventful recovery. Post-operative placental pathology confirmed a diagnosis of placenta accreta.

Figure 1. Significant lab values

	Preoperative	Intraoperative Nadir	Postoperative
Hemoglobin (g/dL)	12.3	9.5	10.3
Hematocrit (%)	38.1	28.0	29.8
Platelet Count (10 ³ /mcL)	208	117	135
Fibrinogen (mg/dL)		171	276
INR		1.1	

Figure 2. Key Pathology Findings

Sections show a few foci of smooth muscle fibers (highlighted by an immunohistochemical stain for desmin) within the decidua basalis. This feature is suspicious for occult placenta accreta.

Discussion

Uterine malformations and fibroids have been implicated in several cases of placenta accreta, with some placentas implanted directly over the fibroid² . For our patient, PAS was not observed on any prenatal ultrasounds. Due to the high morbidity and mortality associated with PAS and that a proportion of women with PAS may not have any established risk factors, future studies are needed to investigate a potential association between fibroids and PAS as well as risk factors for PAS among nulliparous women with fibroids.

References

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