Gravid Hysterectomy in the Setting of Placenta Increta at 12 Weeks Gestation

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ABSTRACT

Introduction: Placenta accreta spectrum is characterized by placental adherence via abnormal trophoblast invasion into uterine myometrium and is associated with significant maternal morbidity and mortality. Given the legal changes to abortion care, discussion of pregnancy termination in the setting of placenta accreta spectrum disorders is worthy of discussion.

Case Presentation: We report the case of a 34-year-old gravida 6 para 2215 who was diagnosed with placenta previa with features consistent with accreta spectrum disease on ultrasound in the late first trimester. Following diagnosis, the patient was counseled on management options and ultimately underwent gravid hysterectomy for definitive treatment in the late first trimester.

Discussion: This case was consistent with placenta accreta spectrum diagnosed in the late first trimester on ultrasound. Following early diagnosis and counseling, definitive management with gravid hysterectomy was undertaken. Pathologic evaluation confirmed placenta increta. Ability to perform gravid hysterectomy was done under the exception to Wisconsin's 1849 ban on termination of pregnancy for necessary termination in the setting of threat to maternal life.

Conclusions: Gestations affected by placenta accreta spectrum result in significant increased risk of maternal morbidity and mortality. Clinicians should be aware of the benefits of early diagnosis and patients counseled on options for definitive management, including termination if desired.

INTRODUCTION

Placenta accreta spectrum (PAS) is a life-threatening condition that is characterized by abnormal placenta adherence and invasion.[1] The prevailing hypothesis for the development of PAS is abnormal trophoblast invasion into the uterine endometrium-myometrial interface.[2] Most commonly, this occurs at the site of an existing uterine scar from prior cesarean section or uterine surgery where the lack of normal decidualization allows for abnormally deep penetration of placental villi into the uterine myometrium. The result is the potential for severe hemorrhage at delivery where estimated average blood loss is reported at 2000-4000 ml, as well as the potential for placental invasion into surrounding pelvic structures beyond the uterus.[3,4] PAS-affected gestations have up to 17-fold higher composite maternal morbidity, measured by hemorrhage, need for embolization, hysterectomy, and intensive care unit admission, whereas mortality rates have been reported up to 7%.[5,6] Unfortunately, the incidence of PAS has increased over the last 4 decades, largely secondary to increasing cesarean delivery rates.[7,8] Pregnancies affected by PAS typically are diagnosed in the second or third trimester. However, increasingly, diagnosis may be made in the late first or early second trimester.[9] The formal recommendation from the American College of Obstetricians and Gynecologists and Society of Maternal Fetal Medicine is that antenatal care for patients diagnosed with PAS is provided at a level III or IV maternal care facility with experience treating PAS.[8]

The authors present the unique case of a multiparous female whose pregnancy was affected by PAS diagnosed in the first trimester. She subsequently underwent gravid hysterectomy in the late first trimester under the condition of threat to maternal life in a state where the provision of abortion care was affected by the 2022 US Supreme Court decision in *Dobbs v Jackson Women's Health Organization*.[10]

CASE PRESENTATION

The patient was a 34-year-old gravida 6 para 2215 Wisconsin

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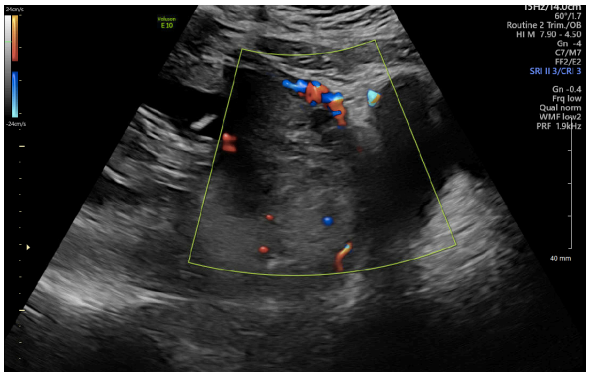
Figure 1. Ultrasound at 12 weeks 1 Day Gestation With Placenta Previa With Evidence of Abnormal Placental Adherence to the Anterior Wall



No visible uterine wall in area of prior cesarean section scar with bulging vascular areas (red and blue doppler color) between uterus and bladder.

Figure 2. Gravid Uterus With Placenta Morbidly Adherent to the Myometrium

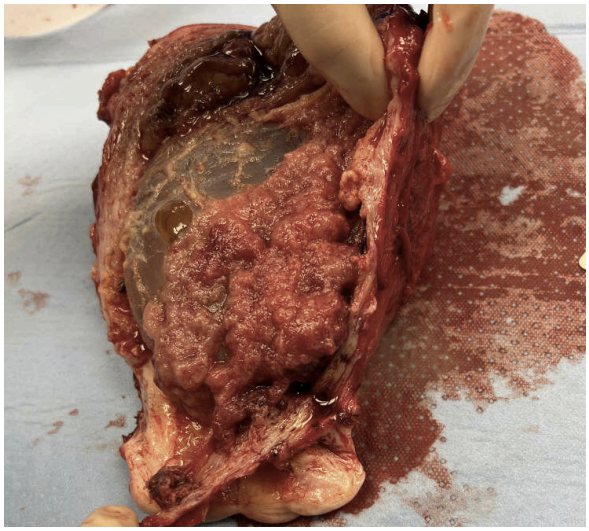
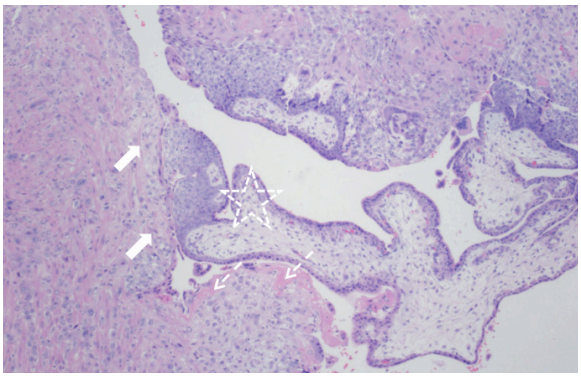


Figure 3. Gravid Uterus and Placenta, Hematoxylin and Rosin Stain, 40x Magnification



Disrupted basal plate architecture. Chorionic villi (star) implanted near myometrial fibers (block arrows) with thin, discontinuous layer of Nitabuch fibrin (dotted arrows) and minimal intervening decidua.

resident with confirmed intrauterine pregnancy who presented initially for abortion care in Illinois. Obstetrical and gynecologic history was significant for 4 term cesarean sections and 1 surgical abortion at approximately 16 weeks. Evaluation in Illinois at approximately 11 weeks gestation revealed concern for placentation overlying the prior cesarean scar and the patient, therefore, deemed not a candidate to proceed with termination in an outpatient setting. Subsequently, she was seen in Wisconsin at 12 weeks 1 day gestation, where ultrasound imaging was consistent with placenta previa and elements consistent with accreta spectrum disease (Figure 1). Attempts to measure myometrial thickness via ultrasound revealed no appreciable tissue between the uterine wall and bladder at the site of prior cesarean sections.

Referral and consultation with maternal fetal medicine and complex family planning were arranged. The patient was offered dilation and curettage with attempt at uterine preservation or gravid hysterectomy. She underwent exploratory laparotomy, significant adhesiolysis, gravid hysterectomy, bilateral salpingectomy, and cystoscopy at 12 weeks and 5 days gestation.

Pathology evaluation revealed placenta previa with increta. Approximately 80% of the placenta was adherent to the myometrium (Figure 2). The depth in placental invasion extended through greater than 90% of the myometrium, to within 0.1 cm from the serosal surface (Figure 3). Gross examination revealed a phenotypically normal appearing 12-week female fetus. The patient had an uncomplicated postoperative course and was discharged postoperative day 3 in good condition. At 2-week follow-up, she was meeting all postoperative milestones.

DISCUSSION

Pregnancies affected by PAS pose significant risks to both the mother and fetus.[4-6] Best clinical outcomes depend on early diagnosis and access to multidisciplinary comprehensive care in timely fashion.[8,9] Clinician awareness of associated risk factors and potential barriers to accessing care are critical for patients as life-threating complications have been reported as early as 7 weeks gestation.[11] Currently, standard surgical technique for delivery and management of PAS in a viable pregnancy is to perform a cesarean hysterectomy with the placenta left in situ following delivery of the fetus to minimize maternal blood loss.[12] The management of previable PAS is dependent on gestational age, disease severity, and patient fertility goals.

This is a unique case of PAS that initially was suspected during early first trimester evaluation for abortion care. The timing of this case occurred after the *Dobbs vs Jackson Women's Health Organization* Supreme Court ruling, where termination is currently unavailable in Wisconsin except in rare circumstances (to save the life of the mother). This case, to our knowledge, is the first reported case of a gravid hysterectomy performed in Wisconsin for the indication of threat to maternal life post *Dobbs* decision and has important precedence implications for women and health care providers that warrant discussion.

Our patient was confronted with multiple barriers to care that negatively impacted her health. Despite her timely recognition of pregnancy and initial presentation for care, the time from diagnosis to definitive treatment was affected by the need to seek abortion care out of state. There is strong evidence that abortion bans disproportionately affect patients of minority and lower socioeconomic status, potentiating disparities in maternal mortality.[13,14] Insurance coverage across state lines is often minimal, and those with Medicaid often are tasked with paying entirely out-of-pocket.[15-18] In this particular case, the diagnosis of PAS required an inpatient setting for treatment where cost was significantly increased relative to those eligible for outpatient or office-based termination.

Another barrier is the ambiguity of current legislation in Wisconsin surrounding medical indications for abortion.[19] Following the *Dobbs* decision, Wisconsin state criminal abortion statute 940.04 (passed in 1849, one year after Wisconsin statehood) stipulates the penalty for termination of pregnancy in the majority of situations results in a class H felony.[20] A physician may perform abortion "to save the life of the mother;" however, a lack of medical precedent cases or guidance on how imminent the risk of maternal life must be in order justify termination leaves both clinicians and patients exposed.[21] Multiple lawsuits to clarify and challenge the statute are ongoing; however, no immediate clarity exists for Wisconsin clinicians or patients.[22,23] The physicians involved in this patient's care thought this case met criteria for significant risk to maternal life warranting definitive treatment with gravid hysterectomy under Wisconsin statute 940.04.

CONCLUSIONS

Health care providers should be aware of risk factors associated with development of placenta accreta spectrum disease, as early diagnosis and counseling on management options is critical for improved patient outcomes. Some women will elect to carry a pregnancy affected by PAS to viability; however, there is significant maternal and fetal morbidity in doing so. Therefore, women also should be counseled on options including termination. Wisconsin criminal abortion statute 940.04 in its current antiquated form places patients and Wisconsin physicians at risk. Despite this, while awaiting legal clarity, Wisconsin physicians must put patient safety above ambiguity and consider therapeutic abortion whenever and wherever there is a threat to maternal life.

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