

Table 2

Frequency of placenta accreta by number of cesarean deliveries and presence of placenta previa [80].

Cesarean delivery	With placenta previa (%)	Without placenta previa (%)
First	3.3	0.03
Second	11	0.2
Third	40	0.1
Fourth	61	0.8
Fifth	67	0.8
Sixth or more	67	4.7

be discouraged from choosing a medication abortion. In Europe, however, where later procedural abortion is very limited, several case series discuss outcomes of medication abortion in the setting of a placenta previa. In one report, four of nine women required transfusion, and one required a hysterectomy for uncontrolled hemorrhage [69]. In another, one of seven women undergoing medication abortion with gemeprost required a transfusion [70]. Two studies reported no hemorrhage when fetal asystole was induced before medication abortion in patients with placenta previa, but the sample sizes were too small to draw conclusions ($n=6$ and $n=2$, respectively) [69,71]. Based on limited evidence, procedural abortion is superior to medication abortion for avoiding hemorrhage in the setting of a placenta previa. If an individual strongly prefers medication abortion or procedural abortion is unavailable, clinicians should discuss the increased risk of bleeding and hemorrhage. Induction of fetal asystole prior to medication abortion in the setting of a previa may decrease the risk of hemorrhage, though insufficient evidence exists to make a recommendation.

2.4. Are patients who have a spontaneous fetal demise at a higher risk for hemorrhage?

There is no evidence that embryonic demise or early pregnancy loss is associated with an increased risk of hemorrhage. In one large trial comparing bleeding patterns after procedural vs medication treatment of early pregnancy failure, fewer than 1% of patients (4/563) required a blood transfusion, all in the medication management arm [72]. Older studies describe an association between second-trimester fetal demise with a retained fetus [73] and coagulopathy, with one study reporting that DIC may result in 20% to 25% of cases when the demised fetus is retained for more than 5 weeks [74]. Several case reports describe patients with fetal demise who subsequently developed DIC, sometimes associated with AFE [75]. Hematologic changes have been reported in people with fetal demise, including increased thrombin generation and platelet activation [76], and could explain why DIC and fetal demise may be associated.

With more widespread use of ultrasound, the occurrence of prolonged intrauterine fetal demise is less common. However, the interval between demise and treatment is often unknown. Some clinicians will obtain a coagulation panel prior to a procedure in the setting of fetal demise; however, there is no evidence to support this practice, as coagulation parameters are almost always normal. Early detection of bleeding and suspicion for DIC as a cause is paramount, as early correction of coagulopathy can prevent hemorrhage from worsening. Specifically, evidence from the obstetric literature indicates that early administration of fibrinogen prevents severe postpartum hemorrhage [77].

A study of 242 patients undergoing second-trimester abortion examined the effect of fetal demise on maternal morbidity [78]. Fetal demise did not increase overall morbidity, but transfusions occurred more frequently (5.8% vs 0.8%, $p=0.07$). Among 92 patients undergoing dilation and evacuation for fetal demise and 4428 having the procedure for another indication, fetal demise was associated with two times higher odds of hemorrhage and 12 times higher odds of

DIC. The overall incidence of DIC in the setting of fetal demise at the time of dilation and evacuation, however, was low (2%) [40]. We suggest using a lower threshold to intervene for bleeding in the setting of procedural abortion for spontaneous fetal demise as the risk of hemorrhage is increased (GRADE 2C).

2.5. What measures should be taken before and during abortion when abnormal placentation or cesarean scar ectopic pregnancy is suspected?

Abnormal placentation, such as placenta accreta, increta, and percreta, characteristically seen in people with a prior uterine scar, has the potential to cause massive hemorrhage during second-trimester procedural abortion [79]. Over the past 30 years, the incidence of PAS has increased fourfold, with approximately three per 1000 deliveries affected, largely due to the increased number of cesarean deliveries. In a person with one prior cesarean delivery, the risk of placenta accreta increases from 0.2% in the absence of placenta previa to 11% in its presence, a 50-fold increase (Table 2) [80]. Other independent risk factors for placenta accreta include advanced maternal age, multiparity, prior uterine surgeries or curettage, and Asherman syndrome [81].

Hemorrhage typically occurs at the time of placental detachment or removal. Diagnosing placenta accreta preoperatively is associated with significantly decreased blood loss at the time of delivery [82] and likely at the time of second-trimester abortion. Hemorrhage with first-trimester abortion from placenta accreta is rare; however, prolonged bleeding after first-trimester abortion may indicate an undiagnosed placenta increta. Three case reports describe placenta increta diagnosed after patients presented for prolonged bleeding after first-trimester abortion, all treated successfully without hysterectomy. Two individuals received embolization [83,84], and one underwent hysteroscopic and laparoscopic resection [85]. We recommend clinicians identify placental location in all people with a uterine scar who are presenting for second-trimester abortion and, if a complete previa is seen, perform a detailed evaluation with ultrasound (GRADE 1A).

Ultrasound detection of PAS has improved over time, largely as a result of the use of color Doppler instead of gray scale [86,87]. In a 2009 study of diagnostic criteria for placenta accreta using three-dimensional power Doppler, sensitivity and specificity were as high as 97% and 92%, respectively [87]. Several studies have compared the sensitivity and specificity of ultrasound and magnetic resonance imaging (MRI) in diagnosing placenta accreta. One retrospective study examined the diagnostic accuracy among all cases of placenta previa or low-lying placenta with a prior cesarean delivery or prior myomectomy over 5 years [88]. Of the 453 cases sampled, 39 had placenta accreta confirmed by pathologic diagnosis. Ultrasound (gray scale and color Doppler) correctly identified 30 of the 39 cases and correctly ruled out the diagnosis in 398 of 414 cases, for a sensitivity and specificity of 77% and 96%, respectively. MRI was done in 14 of the 16 cases with false-positive ultrasound results and correctly ruled out the diagnosis. Only one of the nine false-negative cases had evaluation with MRI, leading to another false-negative diagnosis. We recommend ultrasound as the imaging modality for the evaluation of placenta accreta, but the absence of ultrasound findings does not preclude a diagnosis of PAS. Clinical risk factors are equally important as predictors of PAS (GRADE 1A) [89].

Uterine artery embolization (UAE) is described in more detail for the management of postabortion hemorrhage, but some have suggested its use preoperatively to decrease blood loss when there is a high suspicion for placenta accreta. In a case series in which eight people with suspected PAS were treated with UAE prophylactically, four required hysterectomy [90]. In another case series, one patient with suspected placenta increta received prophylactic UAE and still required subsequent hysterectomy [16]. Embolization in the emergent setting, where available, may be more successful because