GUIDANCE DOCUMENT

Morbidly Adherent Placenta

PATIENT IDENTIFICATION

1) Targeted placental imaging in the early 3rd trimester (no later than 28-32 weeks) for MAP:

HISTORICAL RISK FACTORS

- ✓ Prior cesarean delivery
- ✓ Placenta previa or low lying placenta
- ✓ History of endometrial ablation
- ✓ Prior uterine surgery, including multiple dilation & curettage
- ✓ Multiple episodes of vaginal bleeding

SONOGRAPHIC RISK FACTORS

- ✓ Abnormal placental appearance, uterine shape, and/or vascularity of the myometrial wall
- ✓ Current/previous cesarean scar

2) Ultrasound imaging should be the primary diagnostic modality.

3) MRI may be useful for:

- Suspected placenta percreta (extent of invasion)
- Posterior placenta
- Unclear or non-diagnostic ultrasound imaging

4) Advise consultation or multidisciplinary team management at a center with resources:[1]

Suspected placenta accreta/increta/percreta
Placenta previa with abnormal sonographic appearance
Placenta previa with >2 prior cesarean deliveries
History of classical cesarean delivery and anterior placentation
History of endometrial ablation or pelvic irradiation
Inability to adequately evaluate or exclude suspicious findings for placenta accreta in patients with risk factors

(continued)

[1]Silver, AJOG, p. 562. May 2015.

KEY ELEMENTS

The following key elements must be addressed with the patient in the outpatient setting at the time of suspected diagnosis:

- Severity of diagnosis
- Warning signs for immediate hospital evaluation prior to scheduled delivery
- Delivery facility
  (Is the patient aware of your referral plans? Have you discussed these plans with her?)
- Desire for future fertility*
- Health care proxy
- Indicated preterm birth
- Potential maternal & neonatal ICU admissions
- Acceptance of blood transfusion
- Baseline labs
  (CBC, basic metabolic panel, Liver function panel, PT/INR, PTT, fibrinogen)
- Screen for anemia & identify etiology
- Optimize hematocrit
  (see additional recommendations on the management of anemia)

(continued)

*DESIRE FOR FUTURE FERTILITY CONSIDERATIONS

	BENEFITS	RISKS
Hysterectomy	• Definitive therapy	• Hemorrhage
	• Rare readmission for complications	• Bladder injury
Conservative Approach	• Possible uterine preservation	• Delayed PPH
		• Sepsis
		• Coagulopathy requiring delayed reoperation with hysterectomy

UNEXPECTED INTRAOPERATIVE FINDINGS

Unsuspected placenta percreta discovered at LAPAROTOMY BEFORE DELIVERY

INTRAOPERATIVE FINDINGS SUGGESTIVE FOR PERCRETA:

- Distorted or distended lower uterine segment
- Blood vessels visible on uterine serosa
- Placental invasion into bladder or surrounding tissues

No bleeding, stable maternal/fetal status and facility is not prepared

Cover uterus with warm laparotomy packs and await assistance and supplies before proceeding with hysterotomy and operative intervention

Close fascial incision, place staples in skin, and consider transfer to tertiary facility with experience in management of percreta

Active bleeding, patient unstable

Apply local pressure to bleeding areas (other than areas where placental tissue is at risk)

Prepare for hysterotomy and delivery followed by definitive management of placenta percreta

UNEXPECTED INTRAOPERATIVE FINDINGS*

Previously unsuspected placenta accreta discovered after delivery[2]
If this circumstance is encountered after a vaginal delivery, patient should expeditious moved to OR and algorithm followed.

Evaluate available resources

- Blood/blood products
- Surgical assistance *(gynecologic oncologists, vascular surgeons)*
- Critical care specialists
- Interventional radiologists
- Additional equipment *(cystoscope, blood salvage device, equipment for massive transfusion)*

CALL FOR HELP
Gynecologic oncologists
Blood bank specialists *(to activate massive transfusion protocol)*
Surgeons with experience in accreta
Critical care specialists
Interventional radiologists *(should be considered)*
Vascular surgeons *(should be considered)*
Anesthesiologists

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Consider extending incision to Maylard or Cherney incision, if needed

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Keep patient warm

Monitor pH & lactate

Monitor & treat coagulopathy

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Consider conversion to general anesthesia

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Expeditiously close hysterotomy & proceed with hysterectomy

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Assess location & extent of placental invasion visually & with ultrasound

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Evaluate for presence of active bleeding intra-abdominally & vaginally

Consider alternatives only in select situations:

- A blood salvage device (as an alternative in smaller institutions)
- Tamponade devices (as needed)
- Hypogastric artery ligation
- Leave placenta in situ, close hysterotomy, and perform a delayed hysterectomy (only if not bleeding)

* Adapted from: Silver RM, Fox KA, Barton JR, et al. Center of Excellence for Placenta Accreta. Am J Obstet Gynecol. 2015.

[2] Silver & Barbour, 2015

SUGGESTED CRITERIA FOR ACCRETA CENTER OF EXCELLENCE*

MULTIDISCIPLINARY TEAM	ICU & FACILITIES	BLOOD SERVICES
MFM or OB Imaging experts (*ultrasound*) Pelvic surgeon (*gynecologic oncology or urogynecology*) OB or cardiac anesthesiologist Trauma/general surgeon Interventional radiologist Neonatologist	Interventional radiology Surgical or medical ICU (*24-hour availability of intensive care specialists*) NICU (*gestational age appropriate for neonate*)	Massive transfusion capabilities Cell saver and perfusionists Experience and access to alternative blood products Guidance from transfusion medicine specialists or blood bank pathologists

MULTIDISCIPLINARY TEAM TASKS	
Organize	Team meeting for delivery planning
Review	Case & imaging
Determine	• Timing (34 0/7 – 35 6/7 weeks) • Location (L&D vs. main operating room) • Team (as noted above) • Need for IR and/or ureteral stents
Establish	Blood bank massive transfusion capability
Obtain	Pre-operative labs (T&C, CBC, basic metabolic panel, liver function panel, PT, PTT, INR and fibrinogen)
Consider	• Administration/timing of ACTs • Admission day prior to planned surgery
Discuss	Anesthetic and surgical approach • Regional vs. general anesthesia • Vascular access and timing of placement • Patient positioning (dorsal lithotomy vs. supine) • Vertical skin incision • +/- intra-operative sonographic confirmation of anterior placental edge for mapping uterine incision • Fundal or classical uterine incision • No manipulation of placenta during delivery of fetus • Tie umbilical cord and place required sutures for hemostasis on hysterotomy • Immediate hysterectomy vs. waiting for placental separation in lower risk cases
Organize	Emergency plan

IMPORTANT CONSIDERATIONS FOR PROCEDURE DAY
Confirm with blood bank of time/ location of surgery/immediate availability of blood products
Confirm equipment needs
Alert critical care team
Establish adequate IV access for massive hemorrhage
If regional anesthesia and IR planned, place epidural catheter first & minimize hip flexion
Early, aggressive intraoperative transfusion
Re-dose antibiotics for EBL>1500mL or prolonged OR time
Intraoperative SCDs and aggressive post-operative VTE chemoprophylaxis

* Adapted from: Silver. Placenta accreta: center of excellence. Am J Obstet Gynecol 2015.