**AN ADAPTED EVIDENCE-BASED CLINICAL PRACTICE GUIDELINE**

**ON**

**MANAGEMENT OF PLACENTA ACCRETA SPECTRUM (PAS)**

**Overview**

This is an adapted evidence-based clinical practice guideline for the management of placenta accreta spectrum.

**Guideline adapter**

**This guideline has been adapted by the Egyptian Universities Obstetrics & Gynecology Guideline Working Group (EUOBGYN-GWG).**

**Release date**

July 2023

**GUIDELINE ADAPTATION METHODOLOGY**

This guideline was produced in accordance with the ADAPTE methodology and procedure for the adaptation of evidence-based clinical practice guidelines published by the ADAPTE Group (Fervers B, et al., Adaptation of clinical guidelines: literature review and proposition for a framework and procedure. Int J Qual Health Care 2006; 18(3): 167-176).

**sources of the guideline**

**This guideline was adapted from:**

1. Jauniaux E, Alfirevic Z, Bhide AG, etal. Royal College of Obstetricians and Gynaecologists. Placenta Praevia and Placenta Accreta: Diagnosis and Management: Green-top Guideline No. 27a. BJOG. 2019 Jan;126(1):e1-e48
2. FIGO Placenta Accreta Diagnosis and Management Expert Consensus Panel. FIGO consensus guidelines on placenta accreta spectrum disorders: series of articles. Int J Gynaecol Obstet. 2018 Mar;140(3):261-298
3. American College of Obstetricians and Gynecologists; Society for Maternal-Fetal Medicine. Obstetric Care Consensus No. 7: Placenta Accreta Spectrum. Obstet Gynecol. 2018 Dec;132(6):e259-e275
4. Hobson SR, Kingdom JC, Murji A, et al. SOGC Clinical Practice Guideline. No. 383-Screening, Diagnosis, and Management of Placenta Accreta Spectrum Disorders. J Obstet Gynaecol Can. 2019 Jul;41(7):1035-1049

# Introduction:

Placenta Accreta Spectrum [PAS]: When the placenta penetrates through the decidua basalis. It is a general term comprising placenta accreta, increta & percreta.

# Antenatal diagnosis and outcome of women with PAS:

1. **WHAT ARE THE RISK FACTORS FOR WOMEN WITH PAS:**

* The major risk factors for PAS are history of accreta in a previous pregnancy, previous CS and other uterine surgery, including repeated endometrial curettage. This risk rises as the number of prior CS increases.
* Women requesting elective CS for non-medical indications should be informed of the risk of placenta accreta spectrum and its consequences for subsequent pregnancies.

1. **HOW CAN PAS BE SUSPECTED AND DIAGNOSED ANTENATALLY?**

* Antenatal diagnosis of PAS is crucial in planning its management and has been shown to reduce maternal morbidity and mortality.
* Previous CS and the presence of an anterior low-lying placenta or placenta previa should alert the antenatal care team of the higher risk of PAS.
* Ultrasound imaging is highly accurate when performed by a skilled operator with experience in diagnosing PAS.
* Refer women with any ultrasound features suggestive of PAS to a specialist unit with imaging expertise.
* Women with a history of previous CS seen to have an anterior low-lying placenta or placenta previa at the routine fetal anomaly scan at 18 – 22 weeks should be specifically screened for PAS.
* ACOG/SMFM recommend that ultrasound should be repeated at 28 and 32 weeks to confirm placental localization and any evidence for PAS.
* However, absence of ultrasound findings does not preclude diagnosis
* Clinical risk factors remain equally important as predictors for PAS by US findings (Grade 1A).

1. **IS THERE A ROLE FOR MRI IN THE DIAGNOSIS OF PAS?**

* Clinicians should be aware that the diagnostic value of MRI and ultrasound imaging in detecting PAS is similar when performed by experts.
* MRI may be used to complement ultrasound imaging to assess the depth of invasion and lateral extension of myometrial invasion, especially with posterior placentation and/or in women with ultrasound signs suggesting parametrial invasion.

1. **WHERE SHOULD WOMEN WITH PAS BE CARED FOR?**

* Women diagnosed with PAS should be cared for by a multidisciplinary team [MDT] in a specialist center with expertise in diagnosing and managing invasive placentation.
* Delivery for women diagnosed with PAS should take place in a specialist center with logistic support for immediate access to blood products, adult intensive care unit and neonatal intensive care unit by a MDT with expertise in complex pelvic surgery.

1. **WHEN SHOULD DELIVERY BE PLANNED FOR WOMEN WITH PAS?**

* In the absence of risk factors for preterm delivery in women with PAS, planned delivery at 35+0 to 36+6 weeks of gestation provides the best balance between fetal maturity and the risk of unscheduled delivery.

# PLANNING DELIVERY OF WOMEN WITH SUSPECTED PAS:

* Once the diagnosis of PAS is made, a contingency plan for emergency delivery should be developed in partnership with the woman, including the use of an institutional protocol for the management of maternal hemorrhage.

**RELEVANT CONSIDERATIONS FOR CASE OPTIMIZATION IN PLANNED PAS:**

**PREOPERATIVE**

* Optimizing hemoglobin during pregnancy by oral or parenteral iron.
* Verification of specific timing of planned delivery.
* Identification of exact location of delivery (surgical suite and its associated capabilities).
* Verification that necessary preoperative consultations have occurred.
* Consideration of patient and family needs given temporary relocation to PAS center of excellence.
* Antenatal corticosteroids to enhance fetal lung maturity before 34 weeks.

**INTRAOPERATIVE:**

* Verification that appropriate surgical expertise are available.
* Intraoperative availability of resources to optimize each case.
* Intraoperative point of care testing, adequate surgical trays, and necessary urologic equipment.
* Verification of availability of related services as necessary (e.g., interventional radiology).
* Coordination with blood bank done.
* Tranexamic acid: FIGO &SOGC strongly recommend 1 gm slow IV or 1000-1300 mg PO immediately prior to or during CS for PAS.
* Skin incision: FIGO &SOGC recommend midline incision sufficiently high to allow a hysterotomy above the superior placental margin in high-suspicion PAS with major anterior previa.

**POSTOPERATIVE**

* Assurance that critical care services are engaged and available for postoperative care.

**WHAT SHOULD BE INCLUDED IN THE CONSENT FORM FOR CS IN WOMEN WITH SUSPECTED PAS?**

* Any woman giving consent for CS should understand the risks associated with CS in general, and the specific risks of PAS in terms of massive obstetric hemorrhage, increased risk of lower urinary tract damage, the need for blood transfusion and the risk of hysterectomy.
* Additional possible interventions in the case of massive hemorrhage should also be discussed, including cell salvage and interventional radiology where available.

**WHAT HEALTHCARE PROFESSIONALS SHOULD BE INVOLVED?**

* The elective delivery of women with PAS should be managed by a MDT, which should include senior anesthetists, obstetricians and gynecologists with appropriate experience in managing the condition and other surgical specialties if indicated. In an emergency, the most senior clinicians available should be involved.

**WHAT ANAESTHETIC IS MOST APPROPRIATE FOR DELIVERY?**

* The choice of anesthetic technique for CS for women with PAS should be made by the anesthetist conducting the procedure in consultation with the woman prior to surgery.
* The woman should be informed that the surgical procedure can be performed safely with regional anesthesia but should be advised that it may be necessary to convert to general anesthesia if required and asked to consent to this.

# OPTIMIZING THE DELIVERY OF WOMEN WITH PAS:

**WHAT SURGICAL APPROACH SHOULD BE USED FOR WOMEN WITH PAS?**

* All the guidelines recommend that:
  + The hysterotomy should be performed high without incising through the placenta.
  + No attempt to remove the placenta (extirpative approach or forcible manual removal of the placenta) if it shows no signs of separation or cause substantial hemorrhage.
* Cesarean hysterectomy with the placenta left in-situ is preferable to attempting to separate it from the uterine wall.
* When the extent of PAS is limited in depth and surface area, and the entire placental implantation area is accessible and visualized (i.e. completely anterior, fundal or posterior without deep pelvic invasion), uterus preserving surgery may be appropriate, including partial myometrial resection.
* Uterus preserving surgical techniques should only be attempted by surgeons working in teams with appropriate expertise to manage such cases and after appropriate counselling regarding risks and with informed consent.
* There are currently insufficient data to recommend the routine use of ureteric stents in PAS. The use of stents may have a role when the urinary bladder is invaded by placental tissue.

**WHAT SURGICAL APPROACH SHOULD BE USED FOR WOMEN WITH PAS?**

* There is limited evidence to support uterus preserving surgery in PAS and women should be informed of the high risk of peripartum and secondary complications, including the need for secondary hysterectomy.

**IS THERE ANY ROLE FOR EXPECTANT MANAGEMENT (LEAVING THE PLACENTA IN-SITU)?**

* Elective peripartum hysterectomy may be unacceptable to women desiring uterine preservation or considered inappropriate by the surgical team. In such cases, leaving the placenta in situ should be considered.
* When the placenta is left in situ, local arrangements need to be made to ensure regular review, ultrasound examination and access to emergency care should the woman experience complications, such as bleeding or infection.
* Methotrexate adjuvant therapy should not be used for expectant management as it is of unproven benefit and has significant adverse effects.

**HOW ARE WOMEN WITH UNDIAGNOSED OR UNSUSPECTED PAS BEST MANAGED AT DELIVERY?**

* If at the time of an elective repeat CS, where both mother and baby are stable, it is immediately apparent that placenta percreta is present on opening the abdomen, the CS should be delayed until the appropriate staff and resources have been assembled and adequate blood products are available. This may involve closure of the maternal abdomen and urgent transfer to a specialist unit for delivery.
* In case of unsuspected PAS diagnosed after the birth of the baby, the placenta should be left in situ and an emergency hysterectomy performed.