

## Placenta Praevia and Abnormally Invasive Placenta – Full Clinical Guideline

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### 1. Introduction and Definitions

Maternal and fetal morbidity and mortality from placenta praevia and abnormally invasive placenta are considerable. With an increasing caesarean section rate, the number of cases of placenta praevia and its complications, including abnormally invasive placenta, will continue to increase.

Placenta praevia exists when the placenta is inserted wholly or in part into the lower segment of the uterus. It is classified by ultrasound imaging.

### 2. Purpose and Outcomes

To make sure that all medical and midwifery staff are aware of the management plan of women being identified with placenta praevia

### 3. Abbreviations and definitions

LLP	-	Low lying placenta
AIP	-	Abnormally invasive placenta
LSCS	-	Lower segment caesarean section
MRI	-	Magnetic resonance image
TEDS	-	Thromboembolic Deterrent Stockings
USS	-	Ultrasound
VTE	-	Venous thromboembolic disease

- **Placenta Praevia:** the placenta lies over the internal cervical os.
- **Low-lying placenta:** if the leading edge of the placenta is in the lower uterine segment less than 20mm from the internal os on transabdominal or transvaginal ultrasound from 16 weeks gestation, but not covering the cervical os.

**Abnormally invasive placenta** includes placenta accreta, increta and percreta where the placenta penetrates through the decidua basalis into and then through the myometrium.

**Vasa praevia** describes fetal vessels coursing through the membranes over or within 2 cm of the internal cervical os. This can be secondary to a velamentous cord insertion in a single or bi-lobed placenta (vasa praevia type 1), or from fetal vessels running between lobes of a placenta with one or more accessory lobes (vasa praevia type 2).

Unlike placenta praevia, vasa praevia carries no major maternal risk, but is associated with significant risk to the fetus. When the fetal membranes are ruptured, either spontaneously or artificially, the unprotected fetal vessels are at risk of disruption with consequent fetal haemorrhage, even small volumes risking fetal circulatory collapse.

#### 4. Documentation

Please ensure all assessments and individual plans of care are documented clearly in the appropriate records which may include some or all of those listed below

- medical records
- maternity hand held records
- maternity clinical system as appropriate antenatal review and consultant management plan as appropriate.

#### 5. Placenta praevia

- Risk factors include previous Caesarean sections, previous placenta praevia, maternal smoking and assisted reproductive technology (and possible increasing maternal age).
- Prevention and treatment of anaemia is recommended in women with a low-lying placenta.
- The routine fetal anomaly ultrasound scan should identify a low-lying placenta. In these cases a repeat ultrasound should be requested at 32 weeks gestation to confirm a persistent low-lying placenta or placenta praevia. Where the placenta is posterior and covers the internal os, this should be performed in Fetal Medicine to facilitate transvaginal scan.
- In asymptomatic women with a persistent low-lying placenta or placenta praevia a repeat transvaginal scan should be arranged at 36 weeks gestation. Where the low-lying placenta is posterior, the 36 week scan should be in Fetal Medicine.
- In addition, clinical suspicion should be raised in all women with vaginal bleeding after 20 weeks with:
  - high presenting part,
  - an abnormal lie
  - painless or provoked bleeding, irrespective of previous USS results
- In these circumstances, confirmatory USS, preferably with access to transvaginal USS for verification, should be arranged to exclude low-lying placenta or placenta praevia.
- Individualised hospitalisation plans may be considered depending on factors such as distance between home and hospital, bleeding history, acceptance of receiving blood products. In those admitted, a VTE risk assessment must be performed, balancing the risk of developing a VTE with the risk of bleeding from a low lying placenta.
- Asymptomatic women in the third trimester should be counselled about the risk of preterm delivery and obstetric haemorrhage. Those treated at home should attend hospital immediately if they experience any bleeding, including spotting, contractions or pain.
- Transvaginal cervical length scan prior to 34 weeks can be considered to help guide antenatal management; cervical length of <3.1cm or a rapidly decreasing cervical length indicate an increased risk of preterm delivery due to haemorrhage.
- A single course of antenatal steroids is recommended between 34 to 35+6 weeks gestation and is appropriate prior to 34 weeks if the women is high risk of preterm birth.
- Tocolysis may be considered for 48 hours to facilitate administration of antenatal steroids but should not be used to prolong gestation if delivery is indicated based on maternal or fetal concerns.
- Delivery timing – may be considered between 34 to 36+6 weeks if women have a history of bleeding or other preterm delivery risks. Delivery for an uncomplicated placenta praevia should be considered between 36-37 weeks gestation.

- Placenta praevia and low-lying placenta can be associated with massive obstetric haemorrhage and hysterectomy. All women with a placenta praevia should have a documented discussion about delivery, with indications for blood transfusions, hysterectomy and plans to decline blood products.
- Surgery should be carried out by an appropriately experienced operator. In elective cases a senior obstetrician and anaesthetist, usually consultant, should be present. These clinicians should be alerted when an emergency arises to attend urgently.
- Cell salvage is recommended when significant blood loss is expected, especially in women who decline blood products. Where possible it should be used for all cases of anterior placenta praevia.
- Placental transection should be avoided if possible, and pre-surgical ultrasound is helpful for planning surgical approach.
- Consider vertical skin and/or uterine incision when the fetus is in a transverse lie to avoid the placenta, particularly under 28 weeks gestation.
- If the placenta is transected during delivery, immediately clamp the umbilical cord after fetal delivery to minimise blood loss and alert the attending neonatal team, as this may result in some fetal blood loss requiring specific neonatal resuscitation.
- In an obstetric haemorrhage, initiate intrauterine tamponade and/or surgical haemostatic techniques sooner rather than later, with early recourse to hysterectomy if conservative medical and surgical interventions prove ineffective.

## 6. **Abnormally invasive placenta**

- Risk factors include a previous history of abnormally invasive placenta, previous LSCS or other uterine surgery, including repeat or post-partum endometrial curettage.
- Women with any previous caesarean and anterior placenta praevia or features of suspected abnormal placental invasion on scan should be referred to the fetal medicine department, as per the East Midlands AIP pathway.
- The gold-standard for assessment of placental invasion is ultrasound in the hands of an experienced specialist operator. MRI may be used to complement scan imaging to assess depth of invasion and lateral extension of myometrial invasion, but should only be considered following Fetal Medicine assessment, and as part of an MDT discussion.
- Women diagnosed with abnormal placental invasion should be managed by a multi-disciplinary team in a specialist centre with immediate access to blood products, adult ICU, NICU and expertise in complex pelvic surgery, using the East Midlands AIP pathway.
- In the absence of risk factors for preterm delivery, a planned delivery should be considered around 35 to 36+6 weeks gestation.
- There should be a documented discussion about the specific risks of the caesarean section (which may require upper segment incision with midline abdominal access), along with increased risk of lower urinary tract injury, massive obstetric haemorrhage, the need for blood transfusion and hysterectomy and the need for care in a critical care setting post-delivery.
- An elective delivery should be planned with a multi-disciplinary team including senior anaesthetists, obstetricians and gynaecologists (pelvic sidewall surgical expertise), considering interventional radiology and urology input, with neonatal support. This should be arranged via the East Midlands AIP pathway.
- Caesarean section hysterectomy with the placenta left in situ is preferable to attempting to separate it from the uterine wall. If this is unacceptable to the patient, the placenta may be left in situ, with antibiotic cover and local follow up arrangements to review with ultrasound scan and access to emergency treatment for any bleeding or infection. Methotrexate use in conservative management of retained AIP is CONTRAINDICATED and associated with a significant increase in massive haemorrhage.
- Placenta percreta discovered only at caesarean section should NOT proceed to delivery, but should result in emergency consultation with an AIP care provider (as per East Midlands AIP pathway), with transfer for delivery if necessary.

## 7. Vasa praevia

- There is insufficient evidence to provide universal routine screening for all women.
- Multiple pregnancy, multi-lobar placentae and low-lying placentae which extend over three walls of the uterus or have a velamentous cord insertion are at greater risk of having vasa praevia.
- A combination of transabdominal and transvaginal colour Doppler ultrasound provides the best diagnostic accuracy for vasa praevia, and where it is suspected, referral to Fetal Medicine is required..
- Due to the speed of fetal exsanguination and high rate of perinatal mortality in ruptured vasa praevia, delivery by emergency Caesarean section should not be delayed in order to confirm diagnosis. This is recommended where vaginal bleeding and a sudden change in fetal heart rate is associated with rupture of membranes.
- In confirmed cases of vasa praevia in the third trimester, an elective LSCS prior to the onset of labour should be planned between 34-36 weeks in asymptomatic women with corticosteroid cover from 32 weeks gestation due to the increased risk of preterm delivery,
- An individualised decision for elective hospital admission from 30-32 weeks gestation in confirmed vasa praevia cases should be considered, depending on risk factors such as multiple pregnancy, antenatal bleeding and preterm labour.
- In cases of preterm rupture of membranes and/or preterm labour at a viable gestation, an emergency LSCS should be performed without delay.

## 8. Monitoring compliance and Effectiveness

Auditable measures:

Placental site correctly documented at 20 weeks scan

Anterior placenta praevia with previous caesarean referred to Fetal Medicine to exclude AIP

Appropriate follow-up scans at 32/36 weeks for persistent low-lying placenta/placenta praevia

Senior obstetrician and anaesthetist immediately available at delivery

Full blood count monitored and any ante-natal anaemia corrected

Documentation of discussion of antenatal and delivery risks

## 9. References

Placenta praevia and accreta: Diagnosis and management. RCOG Green-top guideline No.27a. September 2018.

Vasa praevia: Diagnosis and management.  
RCOG Green-top guideline 27b. September 2018.

Diagnosis and management of abnormally invasive placentae. East Midlands Fetal Medicine Network Regional Guideline. Dr Nia Wyn Jones; Dr Farah Siddiqui; Dr Janet Ashworth. May 2019

**Documentation Control**

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Key Contact:	Cindy Meijer			