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## Placenta Praevia and Placenta Accreta Guideline

Guideline Number:	618	Supersedes:		Classification	Clinical	
Version No:	Date of EqlA:	Approved by:		Date Approved:	Date made active:	Review Date:
2		Obstetric Guideline, Audit and Research Group Directorate Q&S Group		21.01.2020 27.8.2020	09.09.2020	01.01.2023

Brief Summary of Document:	To identify and appropriately manage placenta praevia in the pregnant woman and plan and manage her delivery accordingly
Scope	Healthcare professionals involved in the care of women identified with a placenta praevia

To be read in conjunction with:	<p>Royal College of Obstetricians and Gynaecologists Green-top Guideline No. 37a.</p> <p>Thromoprophylaxis Guideline</p> <p>Obstetric Haemorrhage Guideline</p> <p>Management of Antepartum Haemorrhage Guideline</p> <p>Anti D Administration Guideline</p> <p>Antenatal electronic Fetal Monitoring Guideline</p> <p>RCOG Green Top Guideline No.27a</p> <p><a href="https://www.rcog.org.uk/en/guidelines-research-services/guidelines/gtg27a/">https://www.rcog.org.uk/en/guidelines-research-services/guidelines/gtg27a/</a></p>
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Patient Information	<a href="https://www.rcog.org.uk/globalassets/documents/patients/patient-information-leaflets/pregnancy/pi-placenta-praevia-placenta-accreta-and-vasa-praevia.pdf">https://www.rcog.org.uk/globalassets/documents/patients/patient-information-leaflets/pregnancy/pi-placenta-praevia-placenta-accreta-and-vasa-praevia.pdf</a>
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Owning group	Obstetric Guideline, Audit and Research Group
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Reviews and updates		
Version no:	Summary of Amendments:	Date Approved:
1	New guideline	14/09/2017
2	Guideline update Approved Directorate Q&S Group	21.01.2020 27.8.2020

Keywords	Placenta praevia, low-lying placenta, Placenta accreta, placenta accreta spectrum, placenta percreta
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Glossary of Terms	
ART	Artificial Reproductive Technology
CLC	Consultant-led care
LSCS	Lower segment caesarean section
PAS	Placenta accrete spectrum
MRI	Magnetic Resonance Imaging
TAS	Trans-abdominal scan
TVS	Trans-vaginal scan

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## 1. INTRODUCTION

- Placenta praevia and placenta accreta are associated with high maternal and neonatal morbidity and mortality. The rates of placenta praevia and accreta have increased and will continue to do so as a result of rising rates of caesarean deliveries, increased maternal age and use of assisted reproductive technology (ART), placing greater demands on maternity-related resources. The highest rates of complication for both mother and newborn are observed when these conditions are only diagnosed at delivery.

### 1.1 DEFINITION

- Placenta praevia occurs when the placenta is inserted wholly or partially into the lower segment of the uterus, lying ahead of the fetal pole. It occurs in 2.8/1000 singleton pregnancies and 3.9/1000 twin pregnancies.
- A major placenta praevia lies over the internal cervical os, whereas a minor or partial placenta praevia has the leading edge of the placenta in the lower uterine segment but not covering the os.
- Placenta accreta describes a morbidly adherent placenta (which includes placenta percreta and placenta increta) that has abnormally implanted into the uterine wall.
- It is associated with placenta praevia, its incidence is rising as more women have lower segment caesarean sections (LSCS) and it carries a high maternal mortality rate of 7%.

## 2. SCOPE

Healthcare professionals involved in the care of women identified with a placenta praevia

## 3. AIM

To identify and appropriately manage placenta praevia in the pregnant woman and plan and manage her delivery accordingly

## 4. OBJECTIVES

- For healthcare professionals to accurately diagnose placenta praevia in the antenatal period using transabdominal (TAS) or transvaginal (TVS) ultrasound imaging and for identified women to have appropriate Consultant-led care throughout their pregnancy and for delivery.
- For healthcare professionals to manage women who present clinically with possible undiagnosed placenta praevia.

## 5. RISK FACTORS FOR PLACENTA PRAEVIA OR LOW-LYING PLACENTA

- Caesarean delivery is associated with an increased risk of placenta praevia in subsequent pregnancies. This risk rises as the number of prior caesarean sections increases.
- Assisted reproductive technology  
Maternal smoking increase the risk of placenta praevia.

## 3.1 THE ROLE OF TVS IN ASSESSING PLACENTA PRAEVIA OR LOW-LYING PLACENTA

- Clinicians should be aware that TVS for the diagnosis of placenta praevia or a low-lying placenta is superior to transabdominal and trans-perineal approaches and is safe.
- In women with a persistent low-lying placenta or placenta praevia at 32 weeks of gestation who remain asymptomatic, an additional TVS is recommended at around 36 weeks of gestation to inform discussion about mode of delivery.
- Cervical length measurement may help facilitate management decisions in asymptomatic women with placenta praevia. A short cervical length on TVS before 34 weeks of gestation increases the risk

## 6. SCREENING FOR PLACENTA PRAEVIA OR LOW-LYING PLACENTA

- The mid-pregnancy routine fetal anomaly scan should include placental localisation thereby identifying women at risk of persisting placenta praevia or a low-lying placenta.
- The term placenta praevia should be used when the placenta lies directly over the internal os.
- For pregnancies at more than 16 weeks of gestation the term low-lying placenta should be used when the placental edge is less than 20 mm from the internal os on transabdominal or transvaginal scanning (TVS).
- If the placenta is thought to be low lying (less than 20 mm from the internal os) or praevia (covering the os) at the routine fetal anomaly scan, a follow-up ultrasound examination including a TVS is recommended at 32 weeks of gestation to diagnose persistent low-lying placenta and/or placenta praevia.

## 7. MANAGEMENT OF WOMEN WITH PLACENTA PRAEVIA OR LOW-LYING PLACENTA

### 5.1 WOMEN WITH RECURRENT BLEEDING

- Tailor antenatal care, including hospitalisation, to individual woman's needs and social circumstances, e.g. distance between home and hospital and availability of transportation, previous bleeding episodes, haematology laboratory results, and acceptance of receiving donor blood or blood products.
- Where hospital admission has been decided, an assessment of risk factors for venous thromboembolism in pregnancy should be performed as outlined in the Royal College of Obstetricians and Gynaecologists Green-top Guideline No. 37a. This will need to balance the risk of developing a venous thromboembolism against the risk of bleeding from a placenta praevia or low-lying placenta.
- It should be made clear to any woman being treated at home in the third trimester that she should attend the hospital immediately if she experiences any bleeding, including spotting, contractions or pain (including vague suprapubic period-like aches).

### 5.2 ASYMPTOMATIC WOMEN

- Women with asymptomatic placenta praevia or a low-lying placenta in the third trimester should be counselled about the risks of preterm delivery and obstetric haemorrhage, and their care should be tailored to their individual needs.

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- Women with asymptomatic placenta praevia confirmed at the 32-week follow-up scan and managed at home should be encouraged to ensure they have safety precautions in place, including having someone available to help them as necessary and ready access to the hospital.

## 8. THE ROLE OF CERVICAL CERCLAGE

- The use of cervical cerclage to reduce bleeding and prolong pregnancy is not supported by sufficient evidence to recommend its use outside of a clinical trial.

## 9. ANTENATAL CORTICOSTEROIDS

- A single course of antenatal corticosteroid therapy is recommended between 34<sup>+0</sup> and 35<sup>+6</sup> weeks of gestation for pregnant women with a low-lying placenta or placenta praevia and is appropriate prior to 34<sup>+0</sup> weeks of gestation in women at higher risk of preterm birth.

## 10. INDICATION FOR TOCOLYSIS

- Tocolysis for women presenting with symptomatic placenta praevia or a low-lying placenta may be considered for 48 hours to facilitate administration of antenatal corticosteroids.
- If delivery is indicated based on maternal or fetal concerns, tocolysis should not be used in an attempt to prolong gestation.

## 11. TIMING OF DELIVERY

- Late preterm (34<sup>+0</sup> to 36<sup>+6</sup> weeks of gestation) delivery should be considered for women presenting with placenta praevia or a low-lying placenta **and** a history of vaginal bleeding **or** other associated risk factors for preterm delivery.
- Delivery timing should be tailored according to antenatal symptoms and, for women presenting with uncomplicated placenta praevia, delivery should be considered between 36<sup>+0</sup> and 37<sup>+0</sup> weeks of gestation.

## 12. MODE OF DELIVERY – GENERAL CONSIDERATIONS

- Prior to delivery, all women with placenta praevia and their partners should have a discussion regarding delivery.
- Indications for blood transfusion and hysterectomy should be reviewed and any plans to decline blood or blood products should be discussed openly and documented.
- Placenta praevia and anterior low-lying placenta carry a higher risk of massive obstetric haemorrhage and hysterectomy. Delivery should be arranged in a maternity unit with on-site blood transfusion services and access to critical care.
- Women with atypical antibodies form a particularly high-risk group and the care of these women should involve discussions with the local haematologist and blood bank.
- Prevention and treatment of anaemia during the antenatal period is recommended for women with placenta praevia or a low-lying placenta as for any pregnant woman

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## 10.1 VAGINAL DELIVERY

- In women with a third trimester asymptomatic low-lying placenta the mode of delivery should be based on the clinical background, the woman's preferences, and supplemented by ultrasound findings, including the distance between the placental edge and the fetal head position relative to the leading edge of the placenta on TVS.

## 10.2 CAESAREAN SECTION

- As a minimum requirement for a planned caesarean section for a woman with placenta praevia, the surgical procedure should be carried out by an appropriately experienced operator.
- In cases of planned caesarean section for placenta praevia or a low-lying placenta, a senior obstetrician (usually a consultant) and senior anaesthetist (usually a consultant) should be present within the delivery or theatre suite where the surgery is occurring.
- When an emergency arises, the senior obstetrician and senior anaesthetist should be alerted immediately and attend urgently.

### 10.2.1 CHOICE OF ANAESTHESIA

- Regional anaesthesia is considered safe and is associated with lower risks of haemorrhage than general anaesthesia for caesarean delivery in women with placenta praevia or a low-lying placenta.
- Women with anterior placenta praevia or a low-lying placenta should be advised that it may be necessary to convert to general anaesthesia if required and asked to consent.

## 13. REQUIREMENT OF BLOOD PRODUCTS

- Close liaison with the hospital transfusion laboratory is essential for women presenting with placenta praevia or a low-lying placenta.
- Rapid infusion and fluid warming devices should be immediately available.
- Cell salvage is recommended for women where the anticipated blood loss is great enough to induce anaemia, in particular, in women who would decline blood products.

## 14. SURGICAL MANAGEMENT OF PLACENTA PRAEVIA OR LOW-LYING PLACENTA

- Consider vertical skin and/or uterine incisions when the fetus is in a transverse lie to avoid the placenta, particularly below 28 weeks of gestation.
- Consider using preoperative and/or intraoperative ultrasonography to precisely determine placental location and the optimal place for uterine incision.
- If the placenta is transected during the uterine incision, immediately clamp the umbilical cord after fetal delivery to avoid excessive fetal blood loss.
- If pharmacological measures fail to control haemorrhage, initiate intrauterine tamponade and/or surgical haemostatic techniques sooner rather than later. Interventional radiological techniques should also be urgently employed where possible.
- Early recourse to hysterectomy is recommended if conservative medical and surgical interventions prove ineffective.

## 15. PLACENTA ACCRETA SPECTRUM

### 13.1 RISK FACTORS FOR PLACENTA ACCRETA



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

## 13.2 ANTENATAL DIAGNOSIS OF PLACENTA ACCRETA SPECTRUM

- This is crucial in planning its management and has been shown to reduce maternal morbidity and mortality.
- Previous caesarean delivery and the presence of an anterior low-lying placenta or placenta praevia should alert the antenatal care team of the higher risk of placenta accreta spectrum.

## 13.3 THE ROLE OF ULTRASOUND IN DIAGNOSIS OF PLACENTA ACCRETA SPECTRUM

- Ultrasound imaging is highly accurate when performed by a skilled operator with experience in diagnosing placenta accreta spectrum.
- Refer women with any ultrasound features suggestive of placenta accreta spectrum to a specialist unit with imaging expertise.
- Women with a history of previous caesarean section seen to have an anterior low-lying placenta or placenta praevia at the routine fetal anomaly scan should be specifically screened for placenta accreta spectrum.

### 13.3.1 THE ROLE OF MRI IN DIAGNOSIS OF PLACENTA ACCRETA SPECTRUM

- Clinicians should be aware that the diagnostic value of MRI and ultrasound imaging in detecting placenta accreta spectrum 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

## 16. PLACE OF DELIVERY

- Women diagnosed with placenta accreta spectrum should be cared for by a multidisciplinary team in a specialist centre with expertise in diagnosing and managing invasive placentation.
- Delivery for women diagnosed with placenta accreta spectrum should take place in a specialist centre with logistic support for immediate access to blood products, adult intensive care unit and neonatal intensive care unit by a multidisciplinary team with expertise in complex pelvic surgery.

## 14.1 TIMING AND PLANNING OF DELIVERY

- In the absence of risk factors for preterm delivery in women with placenta accreta spectrum, planned delivery at 35<sup>+0</sup> to 36<sup>+6</sup> weeks of gestation provides the best balance between fetal maturity and the risk of unscheduled delivery.

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- Once the diagnosis of placenta accreta spectrum 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 haemorrhage.
- The elective delivery of women with placenta accreta spectrum should be managed by a multidisciplinary team, which should include senior anaesthetists, obstetricians and gynaecologists with appropriate experience in managing the condition and other surgical specialties if indicated. In an emergency, the most senior clinicians available should be involved.

## 14.1.1 CONSENTING PATIENT WITH PLACENTA ACCRETA

- Any woman giving consent for caesarean section should understand the risks associated with caesarean section in general, and the specific risks of placenta accreta spectrum in terms of massive obstetric haemorrhage, 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 haemorrhage should also be discussed, including cell salvage and interventional radiology where available.

## 14.1.2 TYPE OF ANAESTHESIA

- The choice of anaesthetic technique for caesarean section for women with placenta accreta spectrum should be made by the anaesthetist 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 anaesthesia but should be advised that it may be necessary to convert to general anaesthesia if required and asked to consent to this.

## 17. SURGICAL APPROACHES FOR PLACENTA ACCRETA

- Caesarean section hysterectomy with the placenta left in situ is preferable to attempting to separate it from the uterine wall.
- When the extent of the placenta accreta is limited in depth and surface area, and the entire placental implantation area is accessible and visualised (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 placenta accreta spectrum. The use of stents may have a role when the urinary bladder is invaded by placental tissue.

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## 15.1 SURGICAL APPROACHES FOR PLACENTA PERCRETA

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

## 15.2 EXPECTANT MANAGEMENT

- 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.

## 15.3 INTERVENTIONAL RADIOLOGY

- Larger studies are necessary to determine the safety and efficacy of interventional radiology before this technique can be advised in the routine management of placenta accreta spectrum.
- Women diagnosed with placenta accreta spectrum who decline donor blood transfusion should be cared for in a unit with an interventional radiology service.

## 18. MANAGEMENT OF UNDIAGNOSED PLACENTA ACCRETA AT DELIVERY

- If at the time of an elective repeat caesarean section, where both mother and baby are stable, it is immediately apparent that placenta percreta is present on opening the abdomen, the caesarean section 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 placenta accreta spectrum diagnosed after the birth of the baby, the placenta should be left in situ and an emergency hysterectomy performed.

## 19. DOCUMENTATION

- All documentation and risk assessments must be recorded and filed in the All Wales Maternity Handheld Record, Labour and Delivery Record and ancillary Health Board documentation.
- Maternal consent is to be clearly recorded on the relevant Health Board Consent Form
- HDU chart to be used for all major APHs
- MEOWS to be completed for all women diagnosed with an APH, PPH

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- Care plans are to be inputted onto Welsh PAS for women with risk factors for placenta praevia or low-lying placenta.

## 20. COMMUNICATION

- All pregnant women diagnosed with placenta praevia/ low-lying placenta should be provided with accurate and accessible information about the risks associated with the condition.
- Maternal wishes and concerns should be discussed and documented.

## 21. AUDITABLE STANDARDS

- Number of women diagnosed with placenta praevia, low-lying placenta, placenta accrete, placenta percreta
- Previous history of PAS, anterior placenta, previous caesarean section
- The number of women with on-going blood loss >1500mls
- The number of women having a hysterectomy
- All major obstetric haemorrhages >1500mls will be Datix reported.
- Monitoring of all major obstetric haemorrhages will be monitored through the Maternity Dashboard and Datix incident reporting system
- Perinatal outcome of cases with a diagnosis of placenta praevia, low-lying placenta
- Percentage of women with postnatal follow-up documented.

## 22. REFERENCES

<https://www.rcog.org.uk/en/guidelines-research-services/guidelines/gtg27a/>

23. APPENDIX A: FLOWCHART FOR THE MANAGEMENT OF PLACENTA PRAEVIA AND PLACENTA ACCRETA

