Frimley Health
NHS Foundation Trust

Placenta Praevia, Accreta and other Placental Pathology

Key Points

- Risk factors for placenta praevia include assisted reproductive therapy, smoking, previous Caesarean Section(s)
- Risk factors for placenta accreta include placenta praevia, previous accreta, previous Caesarean Section(s), maternal age, assisted reproductive therapy, previous repeat endometrial curettage and uterine surgery such as myomectomy.
- All patients should have the placental position documented at the mid-trimester anomaly scan
- Consider placenta accreta in patients with placenta praevia, particularly if the patient has had previous Caesarean Section(s)
- Patients with low lying placenta/placenta praevia at the mid-trimester anomaly scan, the position of the placenta should be reassessed with a routine departmental ultrasound scan at 32 weeks
- TV scanning can be helpful in confirming placental position
- FMU referral is indicated for patients with placenta praevia in the 3rd trimester and signs of accreta.
- It is good practice to assess the placenta appearance when undertaking both anomaly and growth scans. When placenta pathology, such as sub-amniotic haematoma and chorioangioma, is identified women should be referred to the Fetal Medicine team.

Version: 2.0
Date Issued: 4 April 2024
Review Date: March 2027
Key words: Placenta, accreta, praevia, low lying placenta, placental pathology, abnormally invasive placenta, placenta accreta spectrum

Abbreviations

AIP	Abnormally Invasive Placenta
ANC	Antenatal clinic
ART	Assisted Reproductive Therapy
DAU	Day assessment unit
ERPC	Evacuation of Retained Products of Conception
FMU	Fetal medicine unit
IVF	In vitro fertilisation
RCOG	Royal College of Obstetricians and Gynaecologists
STOP	Surgical Termination of Pregnancy
TA	Trans abdominal
TVS	Trans vaginal scan

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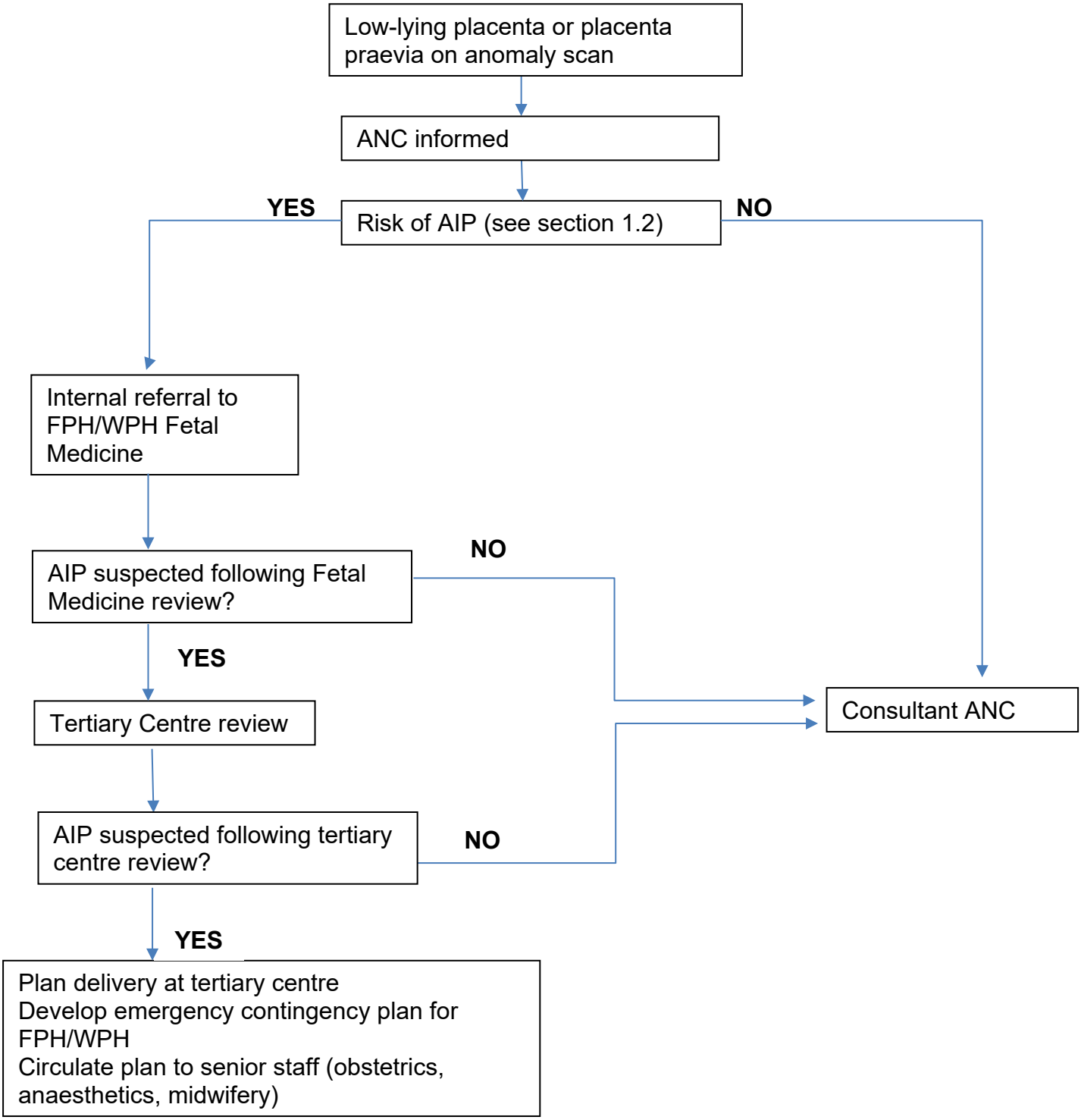

1. INTRODUCTION

1.1 Definitions

Placenta praevia is defined as a placenta which completely covers the cervix.
Low lying placenta is defined as a placenta which is <20mm from the cervix at >16 weeks gestation by trans abdominal or TVS.

Risk factors for placenta praevia include assisted reproductive therapy (ART), maternal smoking, previous Caesarean section(s).

Placenta accreta spectrum (also termed 'abnormally adherent and invasive placenta') is a range of conditions where the placenta is abnormally attached to the myometrium. This ranges from abnormally adherent to deeply invasive.

- **Accreta or adherenta** – placental villi adhere superficially to myometrium
- **Increta** – villi penetrate deeply in the myometrium down to the serosa
- **Percreta** – villi perforate through the entire uterine wall and may invade surrounding pelvic organs such as the bladder

Risk factors for placenta accreta spectrum include placenta praevia, history of accreta in a previous pregnancy, previous Caesarean section delivery (the risk increases with the number of previous Caesarean sections), maternal age, ART (especially IVF), other uterine surgery including repeated endometrial curettage and myomectomy.

1.2 Risk factors for abnormally invasive placenta (AIP)

- Previous AIP
- Previous Caesarean section
- History of ≥ 2 episodes of endometrial curettage (including ERPC and STOP)
- History of uterine surgery involving the endometrium (eg myomectomy which breached the cavity or resection of uterine septum)
- Endometrial ablation
- Asherman's syndrome

This guideline refers to the antenatal management of asymptomatic patients with sonographically detected placenta praevia. Those patients who present with vaginal bleeding will need to have their management individualised in accordance with their clinical presentation. Further details and surgical management are covered by the RCOG Green Top Guideline No. 27a: "Placenta Praevia and Placenta Accreta: Diagnosis and Management".

This guideline also indicates other placental conditions that should be referred to the Fetal Medicine Team when identified by the sonography team.

2. DIAGNOSIS

The placenta should be localised on the mid-trimester anomaly scan. Its appearance should be assessed for abnormalities. Normally the placenta is a homogenous structure although in the third trimester may demonstrate echolucensies and calcifications which are a normal feature of placental maturation.

An anterior low-lying placenta and a history of previous Caesarean section should prompt consideration of placenta accreta. Antenatal diagnosis of placenta accreta is crucial in planning

its management and reduces maternal morbidity and mortality – a considerable proportion are undetected antenatally. Patients where there is a high risk of, or suspicion of, placenta accreta.at the anomaly scan need to be seen in a Fetal Medicine Clinic at 28 weeks.

Sonographic features that indicate placenta accreta include loss of the normal hypoechoic plane in the myometrium beneath the placental bed, the presence of multiple placental lacunae and loss of the normal hyperechoic line separating the urinary bladder from the uterus.
Patients with a low-lying placenta or placenta previa should be advised to abstain from penetrative sexual intercourse and call the MAMMAs line if they experience vaginal bleeding. All such woman being treated at home in the third trimester should be told that they should attend the hospital immediately if experiencing any bleeding, including spotting, contractions or pain (including vague suprapubic period-like aches).

Patients with a low-lying placenta or considered to be lying over the cervical os on their anomaly scan should be rebooked for a departmental scan (with sonographers) at 32 weeks to check placental position.

At the 32-week scan, if the placenta appears low lying on transabdominal (TA) scan, a transvaginal scan (TVS) can be considered to measure the distance from leading edge of placenta to the internal cervical os. TVS has been shown to be superior in detecting placenta praevia. A scan image demonstrating the distance between the leading edge of the placenta and the internal cervical os should be saved on Astria and measurement recorded on the antenatal scan reported filed in the Epic antenatal records.

If a TVS is performed for placental localisation, the cervical length should be measured as this may aid in decision making regarding delivery and identify patients at higher risk of preterm delivery. A cervical length <25mm before 34 weeks is associated with an increased risk of emergency delivery and massive obstetric haemorrhage. These patients should be referred to Fetal Medicine Unit (FMU) for urgent review.

If the placental edge is >2cm from the internal os, the patient does not require any further placental localisation scans.

If the placenta remains low lying or over the cervical os on TA and/or TV scan at 32 weeks gestation, refer to a Consultant antenatal clinic for review at 34 - 36 weeks gestation together with a repeat antenatal ultrasound scan to reassess the placental position on the day of their appointment. The RCOG guidance advises review at 36 weeks gestation as placental migration is less likely after this gestation. However, if there is any suggestion or possibility of placenta accreta, an earlier review should occur in a Fetal Medicine Clinic as this will enable timely referral to tertiary centres if necessary and appropriate prescription of antenatal steroids.

All patients with low lying placenta/placenta praevia, particularly those with previous uterine surgery, should be screened for the sonographic signs of accreta, using greyscale imaging and colour doppler (see Appendix) and if present, should be referred to FMU for urgent review.

Asymptomatic patients with low lying placentas at 32 weeks should be encouraged to ensure they have safety precautions in place, including someone available to help them as necessary and ready access to the hospital. They should be counselled about the risk of preterm delivery and obstetric haemorrhage, and they should be advised to avoid penetrative vaginal intercourse and immediately seek medical advice if they experience vaginal bleeding, including spotting, contractions, or pain.

The use of cervical cerclage to reduce bleeding and prolong pregnancy is not supported by sufficient evidence.
Discuss the risks and benefits of a single course of antenatal corticosteroid therapy in line with local Trust steroid guidelines.

Late preterm (34+0 to 36+6 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+0 and 37+0 weeks of gestation.

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

However, should the woman present with major haemorrhage to her local hospital (either WPH or FPH) and it is deemed unsafe to transfer her out to the tertiary specialist centre then she will need local delivery. In these cases, the superior edge of the placenta should be localised by scan and the uterine incision made above it to avoid transecting the placenta. A midline incision should be considered so that the baby can be delivered through the fundus and the placenta can be left in-situ in the uterus. Advice should be sought from the tertiary centre and appropriate massive haemorrhage protocols enacted.

3. FETAL MEDICINE UNIT PROTOCOL

If the placenta appears low lying and the leading edge cannot be clearly visualised, on TA scan, a TVS should be performed to measure the distance from the leading edge of the placenta to the internal cervical os. Cervical length should be measured if TVS is performed – this may aid in decision making regarding delivery.

All patients referred with suspected accreta should be screened for the ultrasound signs of accreta documented in the Appendix. Where placenta accreta is suspected patients should be referred urgently to St Georges Hospital Fetal Medicine Unit or to John Radcliffe, Oxford Fetal Medicine Clinic for evaluation.

If the diagnosis of placenta accreta is confirmed, delivery should take place in a tertiary 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.

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 and/or transfer to a tertiary centre if placenta accreta suspected. If delivery is indicated based on maternal or fetal concerns, tocolysis should not be used in an attempt to prolong gestation.

4. OTHER PLACENTAL PATHOLOGY

4.1 Molar pregnancies

A complete molar pregnancy is characterized by diffuse hydropic swelling of the villi, seen as diffuse cystic spaces in the placenta with no embryo or fetus present. Same day referral to Early Pregnancy Unit Consultant should be made for management of the pregnancy as at high risk of bleeding.
Partial molar pregnancies are characterized by patchy cystic changes in the placenta and decidua, often fetal or embryonic elements are present. Same day referral to Early Pregnancy Unit Consultant for management.

Rare late partial molar pregnancies are characterized by an enlarged hydropic placenta in combination with a (triploid) fetus with typical severe abnormalities; these include fetal growth restriction, cardiac abnormalities, syndactyly, short limbs, and central nervous system (CNS) abnormalities. Refer to Fetal Medicine Consultant for karyotyping and management.

4.2 Sub-amniotic or sub-chorionic haematoma

The sonographic features of a sub-amniotic haematoma are those of a poorly reflective oval-shaped cystic mass overlying the fetal plate of the placenta and covered in a thin membrane. They arise due to rupture of chorionic blood vessels near the umbilical cord insertion. Refer to Fetal Medicine Clinic for evaluation and timing of delivery, normally by 39 weeks as associated with IUGR.

Subchorionic haematoma are seen on ultrasound scan as a heterogeneous or homogeneous mass with mixed high and low echogenicity, distinct from the normal ultrasonic texture of the placenta, lying beneath the chorionic plate. They may resolve spontaneously particularly when seen in the first trimester. If identified on the anomaly scan or on a growth scan, refer to Fetal Medicine Clinic for evaluation and management.

4.3 Chorioangioma

Chorioangiomas appear as a hypoechoic lobular mass within the placenta on ultrasound scan, often located adjacent to the placental cord insertion. They are placental tumours containing abnormal blood vessels which are supplied by a feeding vessel that can act as an arteriovenous shunt when connected to the fetal circulation. While most are small, the size of the chorioangioma determines its consequences. Larger tumours (>5 cm) are associated with a hyper-dynamic fetal circulation and polyhydramnios, and result in fetal anaemia and heart failure.

Ultrasound assessment should include measuring the size of the tumour and assessment for fetal hydrops, the size of the fetal heart plus measurement of the middle cerebral artery peak systolic velocity (MCA PSV) to assess for anaemia and assessment of amniotic fluid index (AFI).

All chorioangiomas above 4cm in diameter should be referred directly to St Georges Fetal Medicine Unit (from FPH) or John Radcliffe, Oxford, Fetal Medicine Unit to be seen within 72 hours for appropriate management. The baby will need close monitoring with 1 – 2 weekly ultrasound scans with consideration for in-utero treatment or early delivery.

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APPENDIX 1 – PLACENTA ACCRETA SONOGRAPHIC FEATURES

The following standardised descriptions of ultrasound signs should be used, as proposed by the European Working Group on Abnormally Invasive Placenta (2016):

Greyscale imaging

a. **Loss** of the 'clear zone': Loss or irregularity of the hypoechoic plane in the myometrium underneath the placental bed (the 'clear zone').

b. Presence of placental lacunae: irregular, hypoechoic areas within the placenta, may be large and irregular with turbulent flow.

c. Irregularities / thinning/ absence of the bladder wall: loss or interruption of the bright bladder wall (hyperechoic line between the uterine serosa and bladder lumen).

d. Myometrial thinning: myometrium overlying the placenta measures <1mm or is undetectable.

e. Loss of the "clear zone" (hypoechoic plane in the myometrium under the placental bed).

f. Placental bulge: deviation of the uterine serosa from the expected plane, due to a bulge of placental tissue into another organ (typically the bladder). The serosa appears intact, but the shape is distorted.

g. Focal exophytic mass: placental tissue protruding through the uterine serosa and extending beyond it (typically into a urine filled bladder).

2D Colour doppler

a. Hypervascularity: Striking amount of colour doppler flow in uterovesical and subplacental areas. Intraplacental hypervascularity on power doppler – complex, irregular vessels with tortuous courses.

b. Bridging vessels: vessels extending from the placenta, across the myometrium and through the serosa, +/- into other organs. These vessels are often perpendicular to the myometrium.

c. Placental lacunae feeder vessels: vessels from myometrium to placental lacunae, with high velocity flow.

3D Colour Doppler

a. Intraplacental hypervascularity (power Doppler): Complex, irregular arrangement of numerous placental vessels, exhibiting tortuous courses and varying calibres.

FULL VERSION CONTROL RECORD

Version:	2.0
Guidelines Lead(s):	Sima Delavari, Consultant Obstetrician and Gynaecologist, FPH Sarah Safdar, Specialist Registrar for Obstetrics and Gynaecology, FPH Dr Ahmed Elgaml, Specialist Registrar for Obstetrics and Gynaecology, FPH
Contributor(s):	Balvinder Sagoo, Consultant Obstetrician and Gynaecologist, WPH
Lead Director / Chief of Service:	Anne Deans, Chief of Service for Obstetrics and Gynaecology
Library check completed:	22 March 2023
Ratified at:	Cross Site Obstetrics Clinical Governance Meeting, 27 March 2024
Date Issued:	4 April 2024
Review Date:	March 2027
Pharmaceutical dosing advice and formulary compliance checked by:	N/A
Key words:	Placenta, accreta, praevia, low lying placenta, placental pathology, abnormally invasive placenta, placenta accreta spectrum

This guideline has been registered with the trust. However, clinical guidelines are guidelines only. The interpretation and application of clinical guidelines will remain the responsibility of the individual clinician.

If in doubt, contact a senior colleague or expert. Caution is advised when using guidelines after the review date. This guideline is for use in Frimley Health Trust hospitals only. Any use outside this location will not be supported by the Trust and will be at the risk of the individual using it.

Version History

Version	Date	Guideline Lead(s)	Status	Comment
1.0	2019	Shivani Gajree	Final	First cross site version
1.1	2021	Shivani Gajree	Interim	Amendments by S Furness, Consultant, following root cause analysis findings; approved at cross site CG meeting 21/12/2021
2.0	March 2024	Dr S Delavari Dr S Safdar Dr A Elgaml	Final	Approved at Cross Site Obstetrics Clinical Governance Meeting, 27 March 2024

Related Documents

None