Placenta Praevia: Diagnosis and Management

University Hospitals of Leicester NHS Trust

Trust ref:C6/2014

Contents

1. Introduction and Who Guideline applies to

This guideline is intended for the use of all healthcare professionals involved in the diagnosis, antenatal care and delivery of birthing women and birthing people with placenta praevia.

The incidence of placenta praevia is rising and is likely to continue due to the increasing caesarean section rate. Maternal and fetal morbidity and mortality from placenta praevia are considerable. The aim of this guideline is to correctly identify placenta praevia, provide appropriate antenatal care in the correct environment and plan delivery in order to minimise risk to mother and baby.

Related Documents:

Ultrasound UHL Obstetric Guideline.pdf Trust ref: B52/2011

https://www.rcog.org.ukplacenta-praevia-and-placenta-accreta-diagnos.pdf

UHL & East Midlands Abnormally Invasive Placenta guideline

Antepartum Haemorrhage UHL Obstetric Guideline.pdf Trust ref: C39/2011

Postpartum Haemorrhage UHL Obstetric Guideline.pdf Trust ref: C38/2011

Declining Blood and Blood Products UHL Obstetric Guideline.pdfTrust ref: C98/2006

Definitions:

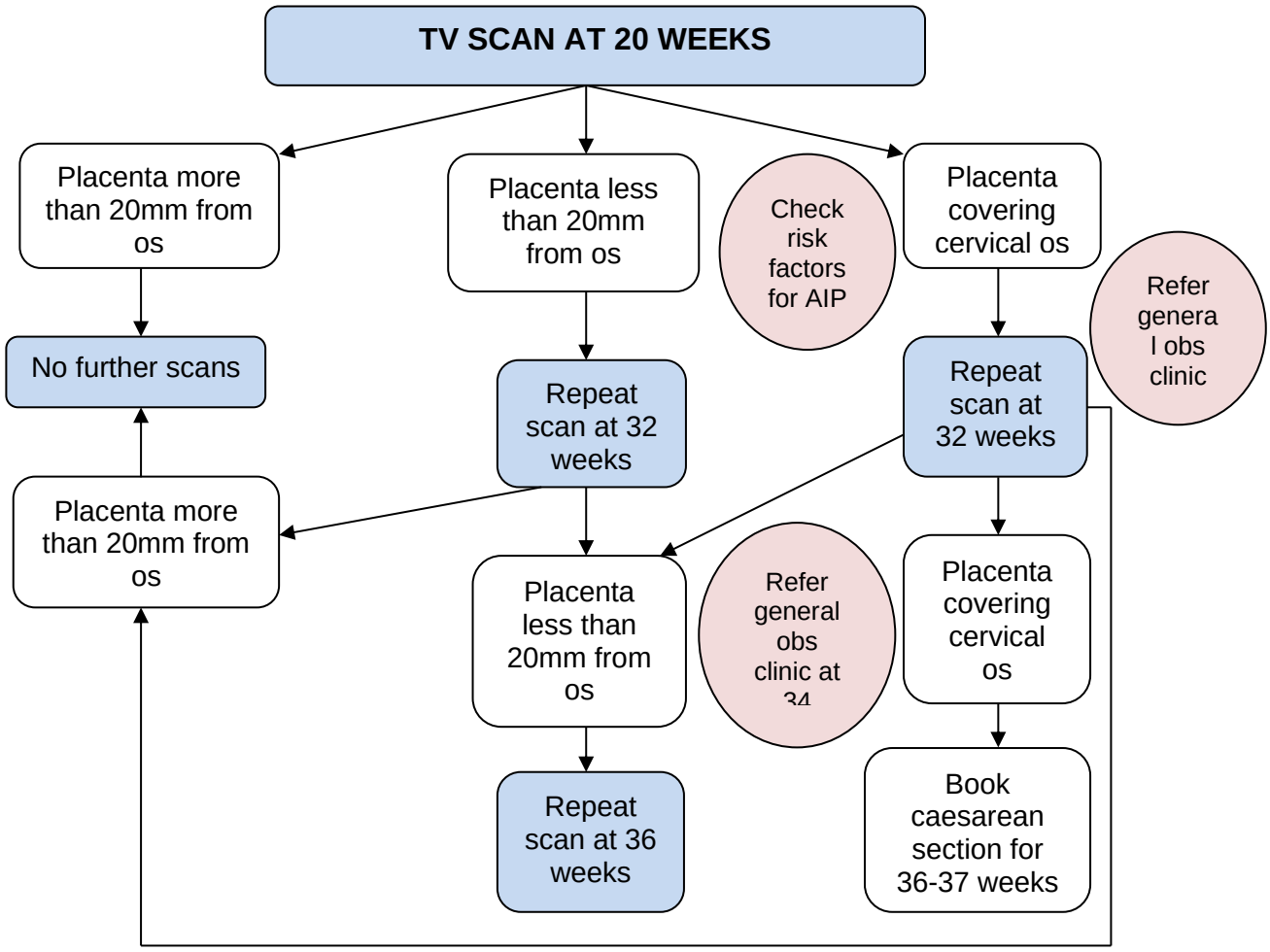
- The term ‘placenta praevia’ is used when the placenta lies directly over the internal os. For pregnancies greater than 16 weeks of gestation, the placenta should be reported as ‘low lying’ when the placental edge is less than 20 mm from the internal os, and as normal when the placental edge is 20 mm or more from the internal os on TAS or TVS. (RCOG Green Top Guideline 27 2018)

2. Diagnosis

Accurate diagnosis of placenta praevia should be made using ultrasound.

2.1 Fetal Anomaly scan

- Routine ultrasound scanning at Fetal Anomaly scan should include placental localisation.
- Where a low lying placenta is suspected on transabdominal scan, a transvaginal scan should be offered to confirm (unless the placenta is obviously completely covering the internal cervical os).
- The use of TVS will reclassify 26-60% of pregnant women and pregnant people with low lying placenta on abdominal ultrasound [1,2] resulting in a reduction in repeat USS.
- If on transvaginal scan the placenta does not cover the internal os or the lower edge is more than 20mm away from the internal cervical os, no further scans for placental localisation are required.
    - If on transvaginal scan the placenta does cover the internal os or is within 20mm of the internal cervical os a further scan at **32 weeks** gestation is offered
- Check for risk factors for abnormally invasive placenta



If a pregnant woman or pregnant person who has a low-lying placenta at Fetal Anomaly scan is admitted with an episode of vaginal bleeding, it may be appropriate

for an ultrasound scan to be performed for placental localisation, earlier than the scheduled scan.

If there is a placenta praevia or a low-lying placenta at 32 weeks a group and save should be sent.

2.2 Follow-up

There should be appropriate follow up in the event of a low lying placenta being diagnosed at Fetal Anomaly scan, depending on history of previous caesarean section.

Apparent placental 'migration' following the development of the lower uterine segment during the third trimester of pregnancy results in the resolution of the low-lying placenta in 90% of the cases before term. This is less likely to occur in pregnant women or pregnant people with a previous caesarean delivery.

Pregnant women and pregnant people with no previous caesarean section;

- If the pregnant woman or pregnant person has had the follow-up scan at **32 weeks** and placenta praevia is diagnosed they should be referred for review in the General Obstetric Clinic/ Consultant Led Clinic at **34 weeks. It is recommended that a group and save sample should be sent at this time.**

- If at the 32 weeks follow up scan the placenta is situated in the lower uterine segment and the lower edge is within 20mm of the internal cervical os they should be referred to the General Obstetric Clinic/ Consultant Led Clinic at 34-6 weeks.

- If the placenta is no longer low lying at the 32 week follow up appointment (20 or more mm from internal cervical os), the pregnant woman or pregnant person can return to their planned antenatal care. This may be with community midwives or a specialised antenatal clinic.

- If at the 36 weeks follow up scan a low-lying placenta or placenta praevia is diagnosed they should be referred for review by the Antenatal Core Midwives. If the next available General Obstetric/ Consultant Led clinic is within 2-3 days it is appropriate to review in clinic. **It is recommended that a group and save sample should be sent at this time.**

Pregnant women and pregnant people with previous caesarean section;

- All pregnant women and pregnant people with a previous caesarean section and an anterior low lying placenta on TVS at Fetal Anomaly scan will need a repeat ultrasound at **24 -28 weeks by the fetal medicine Consultant.** There is a dedicated fetal medicine list at the Leicester Royal Infirmary on the 1st & 3rd Tuesday afternoon of the month.

- If the placenta is **low lying and anterior**, or **anterior and overlying the old caesarean section scar** a **consultant ultrasound assessment** should be arranged and the pregnant woman or pregnant person referred to the next available General Obstetric clinic.

- All other pregnant women and pregnant people with previous caesarean section, including those with a posterior placenta praevia and those where the placenta is no

longer low-lying, should be seen in General Obstetric/Consultant Led clinic at 34 weeks.

- Pregnant women or pregnant people who are suspected to have a scar ectopic pregnancy should be referred to the AIP clinic.

2.3 Additional USS imaging

Additional imaging to detect morbidly adherent placentae should be considered

- Pregnant women and pregnant people who have had uterine surgery in the form of myomectomy or repeated surgical evacuations are also at risk of abnormal placentation.
- The assessment should be performed by a consultant in accordance with defined ultrasound criteria for diagnosis.[4,5]

Ultrasound criteria for diagnosis are as follows:

Grey Scale	Colour Doppler	Three-dimensional power Doppler
● loss of the retroplacental sonolucent zone ● irregular retroplacental sonolucent zone ● thinning or disruption of the hyperechoic serosa–bladder interface ● presence of focal exophytic masses invading the urinary bladder ● abnormal placental lacunae.	● diffuse or focal lacunar flow ● vascular lakes with turbulent flow (peak systolic velocity over 15 cm/s) ● hypervascularity of serosa–bladder interface ● markedly dilated vessels over peripheral subplacental zone.	● numerous coherent vessels involving the whole uterine serosa–bladder junction (basal view) ● hypervascularity (lateral view) ● inseparable cotyledonal and intervillous circulations, chaotic branching, detour vessels (lateral view).

2.4 Inpatient and outpatient management

- Admission to hospital should be considered and an appropriate management plan should be in place, taking in to account distance between home and hospital and availability of transport, previous episodes of bleeding, haematology lab results and acceptance of receiving donor blood or blood products.

- Pregnant women and pregnant people with placenta praevia in the third trimester should be counselled about the risks of preterm delivery (40% deliver <38 weeks gestation) and obstetric haemorrhage, and their care should be tailored to their individual needs.

- If there have been 2 or more episodes of bleeding, inpatient management from 34 weeks should be advised.

- If admitted assess for risk of VTE

- A valid group and save sample should be available in the blood bank.

- If there is an episode of bleeding during admission or if there are other concerns such as pain or tightening's, 4 units of cross-matched blood should be requested. IV access is advised.

- If a patient is managed as an inpatient the anaesthetic and labour ward team should be informed. An anaesthetic review in order for a pre-operative assessment and discussion about anaesthetic techniques is required in the event of bleeding and emergency delivery.

- Consent for caesarean section and blood transfusion should be obtained soon after admission.

- Any outpatient care requires close proximity to the hospital, the constant presence of a companion and full informed consent by the pregnant woman or pregnant person. They should attend hospital immediately in the event of any bleeding, contractions or pain (including vague suprapubic period-like aches).

2.5 Delivery mode, timing and planning

There should be individual planning of the mode and timing of delivery.

A single course of antenatal corticosteroids therapy is recommended in the event of heavy bleeding or delivery is required at less than 36 weeks. Please refer to Preterm Labour Guidance in the Absence of PPROM UHL Obstetric Guideline

Tocolysis for birthing women and birthing people 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.

Vaginal birth

The lower uterine segment continues to develop beyond 36 weeks.

- Vaginal birth can be considered in pregnancies where the lower placental edge is more than 20mm from the internal os and the fetal head is engaged.

- These birthing women and birthing people will require individualised care plans and their past obstetric history and preferences need to be considered, in addition to ultrasound assessment including the thickness of the placenta at the lower edge and the position of the fetal head in relation to the placenta.

- If a vaginal birth is planned an intrapartum care plan should be completed by the responsible clinician. (One copy should be filed in the hand held notes and the other in the hospital notes.)

- Asymptomatic pregnant women and pregnant people with low lying placenta in the third trimester, should have the mode of delivery discussed based on the clinical background, pregnant woman's or person's preferences, supplemented by USS findings including the distance between the placental edge and the fetal head position relative to the leading edge of the placenta on TVS.

Caesarean Section.

Caesarean section is advised where the placenta is less than 20mm from the internal os.

Timing of delivery

- Delivery timing should be tailored according to antenatal symptoms.
- Symptomatic placenta praevia or low lying placenta;
    - Late preterm (34^{+0} to 36^{+6} weeks of gestation) delivery should be considered for pregnant women or pregnant people presenting with placenta praevia or a low-lying placenta and a history of vaginal bleeding or other associated risk factors for preterm delivery.
- Asymptomatic low-lying placenta;
    - The mode of delivery should be based on the clinical background, the pregnant woman or person's preferences, ultrasound findings which should include the distance between the placental edge and the fetal head position relative to the leading edge of the placenta on TVS. However, if the leading edge of the placenta remains less than 20mm at 36 weeks, a caesarean section should be considered by 38 weeks.
- Uncomplicated placenta praevia
    - As the risk of major haemorrhage increases rapidly after 36 weeks of gestation, expert opinions have highlighted that decisions regarding timing of delivery must be individualised and suggest that on the basis of the limited data available, pregnant women and pregnant people with uncomplicated placenta praevia, should undergo scheduled birth by caesarean section between 36+0 and 37+0 weeks of gestation

Preparations for delivery by caesarean section.

- Prior to delivery, all pregnant women and pregnant people 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. Therefore these cases should preferably be performed at The Leicester Royal Infirmary if planned electively.

- Pregnant women and pregnant people with atypical antibodies form a particularly high-risk group and their care should involve discussions with the local haematologist and blood bank.

- Prevention and treatment of anaemia during the antenatal period is recommended for pregnant women and pregnant people with placenta praevia or a low-lying placenta as for any pregnancy.

Consent

- Consent should be obtained soon after the decision for delivery by caesarean section has been made. At present digital consent on Concentrix is available at UHL.
- All should be provided with “Delivery by planned caesarean section” and “Blood transfusion” UHL Trust documents where available.
- The risk of massive obstetric haemorrhage is approximately 12 times more likely with placenta praevia[8]. This should be explained to the pregnant women and pregnant people together with the potential need for blood transfusion.
- The use of Bakri balloons should be discussed.
- The risk of hysterectomy is increased and rises when associated with previous caesarean section[4].

In Theatre

- Close liaison with the transfusion lab is essential for birthing women and people presenting with placenta praevia or a low-lying placenta.
- 4 units of cross-matched blood should be requested and available on delivery suite.
- Rapid infusion and fluid warming devices should be available.
- Cell-salvage should be used for all cases of placenta praevia.
- A consultant obstetrician and consultant anaesthetist should be present in theatre during the procedure

When there are concerns that the placenta may be adherent, or a high chance of hysterectomy where access may be difficult, for example where there are large fibroids or significantly raised BMI consideration for a vertical skin incision should be discussed with the patient. The availability of a gynaecologist who is able to perform a hysterectomy can reduce maternal morbidity and mortality.

Consider vertical uterine incisions when the fetus is in a transverse lie to avoid the placenta, particularly below 28 weeks of gestation in cases of Abnormally Invasive Placenta.

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.

3. Education and Training

None

4. Monitoring Compliance

None

5. Supporting References

1. Smith RS, Lauria MR, Comstock CH, Treadwell MC, Kirk JS, Lee W, et al. Transvaginal ultrasonography for all placentas that appear to be low-lying or over the internal cervical os. *Ultrasound Obstet Gynecol* 1997;9:22–4.

2. Lauria MR, Smith RS, Treadwell MC, Comstock CH, Kirk JS, Lee W, et al. The use of second-trimester transvaginal sonography to predict placenta praevia. *Ultrasound Obstet Gynecol* 1996;8:337–40.

3. Dashe JS, McIntire DD, Ramus RM, Santos-Ramos R, Twickler DM. Persistence of placenta previa according to gestational age at ultrasound detection. *Obstet Gynecol* 2002;99:692–7.

4. Royal College of Obstetricians and Gynaecologists. Green–top
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5. Wong HS, Cheung YK, Zuccollo J, Tait J, Pringle KC. Evaluation of sonographic diagnostic criteria for placenta accreta. *J Clin Ultrasound* 2008;36:551–9.

6. Love CD, Fernando KJ, Sargent L, Hughes RG. Major placenta praevia should not preclude out-patient management. *Eur J Obstet Gynaecol Repr Biol* 2004;117:24–9.

7. Royal College of Obstetricians and Gynaecologists (RCOG), Royal College of Midwives (RCM) and the National Patient Safety Agency (NPSA). Placenta praevia after caesarean section care bundle [http://www.nrls.npsa.nhs.uk/intrapartumtoolkit/?
entryid45=66359].

8. Royal College of Obstetricians and Gynaecologists. Green–top Guideline No.52: Prevention and management of postpartum haemorrhage. London: RCOG; 2009.

6. Key Words

Abnormally Invasive Placenta, Cervical os, Low lying placenta, Transabdominal scan, Transvaginal scan

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The Trust recognises the diversity of the local community it serves. Our aim therefore is to provide a safe environment free from discrimination and treat all individuals fairly with dignity and appropriately according to their needs.
As part of its development, this policy and its impact on equality have been reviewed and no detriment was identified.

EDI Statement

We are fully committed to being an inclusive employer and oppose all forms of unlawful or unfair discrimination, bullying, harassment and victimisation.

It is our legal and moral duty to provide equity in employment and service delivery to all and to prevent and act upon any forms of discrimination to all people of protected characteristic: Age, Disability (physical, mental and long-term health conditions), Sex, Gender reassignment, Marriage and Civil Partnership, Sexual orientation, Pregnancy and Maternity, Race (including nationality, ethnicity and colour), Religion or Belief, and beyond.

We are also committed to the principles in respect of social deprivation and health inequalities.

Our aim is to create an environment where all staff are able to contribute, develop and progress based on their ability, competence and performance. We recognise that some staff may require specific initiatives and/or assistance to progress and develop within the organisation.

We are also committed to delivering services that ensure our patients are cared for, comfortable and as far as possible meet their individual needs.

CONTACT AND REVIEW DETAILS	
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Details of Changes made during review:

Date	Issue Number	Reviewed By	Description Of Changes (If Any)
13.05.14	**1**		
April 2016	**2**	K Jones	General update. Recommendation that all women with placenta accrete deliver at LRI. Checklist for these women added in Appendix.
October 2024	**3**	F Siddiqui	Previous document combined with accreta guidance (C6/2014), now separated. **Updated definitions** **Added scan flow chart** **Women with suspected scar ectopic pregnancy refer to AIP clinic.** **Delivery mode, timing and planning (including C/S) section updated throughout incl; A/N corticosteroids, timing of C/S dependant on symptoms, discussions re-complications and actions if complications arise in theatre.**