Guideline for the management of Placenta Praevia and Placenta Accreta

Placenta Praevia and Placenta Accreta: Diagnosis and Management

Purpose and scope of this guideline

The purpose of this guideline is to describe the diagnostic modalities used for diagnosing placenta praevia and placenta accreta, the clinical management and planning of delivery. The management of the condition vasa praevia is not covered in this local guideline and we refer to the national guidance for the diagnosis and management of this complex condition.(1)
The guideline is not intended to cover all aspects of care and should be used in conjunction with: Placenta Praevia and Placenta Accreta: Diagnosis and management GTG No 27a, fourth edition 2018(1)

Definition

Placenta praevia exists when the placenta is inserted wholly or in part to the lower segment of the uterus. If the placenta lies over the internal os, it is considered a major praevia. If the leading edge of the placenta is in the lower uterine segment but not covering the cervical os, it is considered a minor, or partial, praevia. Placental 'migration' occurs during the second and third trimester owing to development of the lower uterine segment so the majority of women who have a low lying placenta at 20 weeks will not do so by the time they get to the third trimester. This is less likely to happen if the placenta is posterior, if there has been a previous caesarean section or is it is a major placenta praevia.

Clinical Importance

Maternal and fetal morbidity and mortality from placenta praevia and placenta accreta are considerable and, as a result, they are associated with high demands on health resources. With the rising incidence of caesarean sections the number of cases of placenta praevia and its complications, including placenta accreta continues to increase.(2)

A morbidly adherent placenta includes placenta accreta, increta and percreta (referred to as placenta accreta spectrum) as it penetrates through the decidua basalis into and then through the myometrium.

The following table is useful when counselling women with a previous caesarean section and placenta overlying the scar.(3)

Number of previous caesarean sections	Number of women	Number of women with placenta accreta	Chance of placenta accreta if placenta praevia	Number of hysterectomies
0	6201	15 (0.24%)	3%	40 (0.65%)
1	15808	49 (0.31%)	11%	67 (0.42%)
2	6324	36 (0.57%)	40%	57 (0.9%)
3	1452	31 (2.13%)	61%	35 (2.4%)
4	258	6 (2.33%)	67%	9 (3.49%)
5	89	6 (6.74%)	67%	8 (8.99%)

Antenatal screening and diagnosis

Whilst clinical acumen remains vitally important in suspecting and managing placenta praevia, definitive diagnosis relies on ultrasound.[3]

Routine 20 week ultrasound scan should include placental location.[2] Where the placenta is ≤2cm from, reaches or overlaps the cervical os a further ultrasound will be required. Transvaginal ultrasound (TVS) is safe in the presence of placenta praevia and is more accurate than transabdominal ultrasound (TAS) in locating the placenta, particularly for a posterior placenta. Using TAS alone is associated with false positives.[3]

In asymptomatic women repeat ultrasound (TAS +/- TVS) should be performed at 32 weeks. If a praevia is diagnosed the patient should be referred to their named obstetric consultant for a delivery plan. If the placenta remains low a further scan (TAS +/- TVS), at 36 weeks is advised to further assess placenta location to assist delivery planning.[1] If there is any doubt a TVS is more accurate in measuring the distance from the internal os to the leading edge of the placenta, particularly if it is posterior.

Women who bleed should be managed individually in accordance with clinical picture which would often include a repeat ultrasound scan for placental localisation.

Clinical suspicion should be raised in all women irrespective of previous imaging results with

- vaginal bleeding after 20 weeks gestation
- high presenting part
- abnormal lie
- painless or provoked bleeding

Women with anterior placenta praevia and a previous caesarean section or other uterine surgery are at increased risk of placenta accreta. Features of accreta can often be seen at the 20 week scan and if suspected should be a scanned by a consultant. These women should be scanned by a consultant at 32 weeks if the praevia is still present (or earlier if antepartum haemorrhage occurs) who will then arrange further imaging including colour flow Doppler and/or MRI.

In women with multiple caesarean sections i.e. ≥ 3, a further scan at 32 weeks should automatically be arranged for further placental localisation check, independent of findings at 20 weeks scan.

Antenatal management
As with all women, prevention and treatment of anaemia during the antenatal period.

Women with major placenta praevia who have previously bled should be offered admission and managed as inpatients from 34 weeks of gestation. Those with major placenta praevia who remain asymptomatic, having never bled, require careful counselling before contemplating outpatient care. This is the discretion of the woman's named consultant. Any home-based care requires:

- Full informed consent from the woman
- Close proximity to the hospital
- The constant presence of a companion
- Telephone
- Transport

It should be made clear to any women being managed at home that she should attend hospital immediately if she experiences:

- Any bleeding (including 'spotting')
- Any contractions
- Any other pain (including vague suprapubic period-like aches).

Prior to delivery, all women with placenta praevia and their partners should have had documented antenatal discussions regarding:

- Delivery
- Anaesthesia and potential need for a general anaesthetic
- Haemorrhage
- Possible blood transfusion
- Major surgical interventions, such as hysterectomy
- Prevention and treatment of anaemia

Blood availability during inpatient antenatal care is informed by clinical factors relating to individual cases, as well as local blood bank services. Women with atypical antibodies form a particular high risk group and discussion in these cases should involve the local haematologist and blood bank. For women without atypical antibodies, a group and save specimen should be obtained every 7 days whilst the woman remains an in-patient. Routine cross matching is not required if no significant atypical antibodies.

Tocolytics are not to be used for treatment of bleeding due to placenta praevia without consultant approval.

Prolonged inpatient care can be associated with an increased risk of thromboembolism. Thus, gentle mobility and adequate hydration should be encouraged together with the use of prophylactic thromboembolic stockings. Prophylactic anticoagulation should be reserved for those at high risk of thromboembolism.

Anticipatory care for Delivery

Planning of the delivery for these patients needs to be in multidisciplinary team setting and should involve:

- Named Midwife
- Named obstetric Consultant
- Consultant Anaesthetist
- Maternity co-ordinator
- Theatre manager
- Operating surgeon
- Interventional radiology (if applicable)

Mode of delivery

The mode of delivery should be based on clinical judgment supplemented by sonographic information. A placental edge less than 2cm from the internal os on scan will require delivery by caesarean section. In cases of planned caesarean section for placenta praevia or low-lying placenta a senior obstetrician (usually a consultant) and senior anaesthetist (usually a consultant) should be present within the unit or theatre when the surgery is being performed. When an emergency case arises, consultant staff should be alerted and should attend urgently. When elective delivery is possible the named Consultant should liaise with the operating obstetrician (if different) and the theatre manager to discuss the anticipated length of time for CS.

Timing of delivery

The timing of emergency surgery will be influenced by individual clinical circumstances but, where possible, elective caesarean section should be deferred to considered between 36^{+0}and37^{+0}weeks of gestation weeks to minimise neonatal morbidity. A course of steroids can be given1 week prior to planned delivery or earlier if there are risks of preterm delivery, if no previous course has been given.

Location of delivery

When placenta accreta spectrum is suspected or confirmed, a detailed discussion is needed regarding a plan for delivery, including having access to interventional radiology and site of delivery. Placenta praevia deliveries can be performed locally.

Surgical considerations

When the surgeon suspects placenta accreta, they should consider opening the uterus at a site distant from the placenta and attempting to deliver the baby without disturbing the placenta. Going through the placenta at delivery is associated with increased risk of bleeding and a higher chance of hysterectomy and should be avoided. In an emergency where there is a suspicion of placenta accreta, following the delivery of the baby, the placenta should be left in situ and hysterectomy performed.(1)
When the extent of the placenta accreta is limited in surface area and depth then uterine sparing surgery may be appropriate, including partial myometrial resection. Uterine sparing surgery should only be attempted by surgeons working in teams with the appropriate expertise and after appropriate counselling regarding risks and with informed consent. However there is limited evidence to support uterine sparing surgery and women should be informed of high risk of peripartum and secondary complications including the need for a hysterectomy.

For some women, hysterectomy may be unacceptable or considered inappropriate by the surgical team. In such cases, and within the context or MDT discussion, fully informed consent and risk assessment leaving the placenta in situ may be considered. In such cases, regular review, ultrasound examination and access to emergency care is mandatory.(1)

Anaesthetic Assessment

The choice of anaesthetic technique for caesarean section for placenta praevia must be made by the anaesthetist, in consultation with the obstetrician and mother. The category of the caesarean section, the site of the praevia and the experience of the anaesthetist will be factors that are taken into account. There is increasing evidence to support the safety of regional blockade. All women with major PP should be reviewed by an anaesthetist by 34 weeks.

Blood products

Blood should be readily available for the peripartum period. When women have atypical antibodies, direct communications with the local blood bank should enable specific plans to be made to match the individual circumstances. Caesarean sections for cases of placenta praevia should be cross-matched 4 units. Women with placenta praevia who decline blood transfusion should have their care discussed in the MDT setting and consideration that delivery should take place in a unit with a interventional radiology service.(1)

There is no evidence to support the use of autologous blood transfusion for placenta praevia. Cell salvage, if available, may be considered in cases of high risk of massive haemorrhage such as those with multiple pregnancy or placenta accreta and especially in women who would refuse blood transfusion.

Massive haemorrhage (see Anaemia and Massive Obstetric Haemorrhage Guideline)

The surgical manoeuvres required in the face of massive haemorrhage associated with placenta praevia caesarean section should be performed by appropriately experienced surgeons. Calling for extra help early should be encouraged and not seen as "losing face".
The following may help as single measures or in combination:

- Prophylactic IV Tranexamic acid
- Uterotonic agents may help in reducing the blood loss associated with bleeding from the relatively atonic lower uterine segment
- Bimanual compression
- Hydrostatic balloon catheterisation
- Uterine packing
- Aortic compression.
- B-Lynch suture
- Uterine or internal iliac artery ligation
- Hysterectomy.
- Arterial embolisation is useful in selected cases as long as the iliac vessels have not been tied off. (involve interventional radiologists early)

It is important that the major obstetric haemorrhage (MOH) protocol is put in place when there is

- Blood loss greater than 1500mls or any signs of circulatory collapse
- Blood loss greater than 150mls/min or more than 5 litres in 24 hours
- Any worrying or uncontrolled bleeding

It is important to realize than visual blood loss estimation often underestimates the true extent haemorrhage so decision making should be based on clinical signs and more accurate methods, such as blood collection drapes and weighing swabs should be used in addition.

Risk management

As in all high-risk cases, particular attention should be paid to careful documentation of all issues surrounding clinical discussion and decisions. Names of all clinical staff involved should be recorded legibly and signed in the notes, together with the content of any discussions, advanced directives and decisions. Datix should be completed. Postnatal review by the named Consultant should be offered to the patient.

References

1) Management and diagnosis of vasa praevia GTG No 27b, 2018.
2) Placenta Praevia and Placenta Accreta: Diagnosis and management GTG No 27a, fourth edition 2018.
3) Placenta Praevia, Placenta Praevia Accreta and Vasa praevia: Diagnosis and Management GTG No 27, 3rd edition, 2011.

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Suggested Algorithm for Abnormal placentation (Placenta praevia /accreta /percreta/increta)