PLACENTA PRAEVIA

Placenta praevia is generally defined as the implantation of the placenta over or near the internal os of the cervix.

- Total placenta previa occurs when the internal cervical os is completely covered by the placenta.
- Partial placenta previa occurs when the internal os is partially covered by the placenta.
- Marginal placenta previa occurs when the placenta is at the margin of the internal os.
- Low-lying placenta previa occurs when the placenta is implanted in the lower uterine segment. In this variation, the edge of the placenta is near the internal os but does not reach it.

Pathophysiology: The exact etiology of placenta previa is unknown. The condition may be multifactorial and is postulated to be related to prior uterine injury, multiparity, multiple gestations, advanced maternal age, previous cesarean delivery, previous abortion, and possibly, smoking. Unlike first trimester bleeding, second and third trimester bleeding is usually secondary to abnormal placental implantation.

Mortality/Morbidity:

- The maternal mortality rate secondary to placenta previa is approximately 0.03%. Babies born to women with placenta previa tend to weigh less than babies born to women without placenta previa. The risk of neonatal mortality is higher for placenta previa babies versus pregnancies without placenta previa.
- The great majority of deaths are related to uterine bleeding and the complication of disseminated intravascular coagulopathy.
- In early pregnancy, a partial previa can often self-correct as the uterus enlarges and the placental site moves cephalad.

Age: Women older than 30 years are 3 times more likely to have placenta previa than women younger than 20 years are.

History:

- Vaginal bleeding
    - It is apt to occur suddenly during the third trimester.
    - Bleeding is usually bright red and painless. Some degree of uterine irritability is present in about 20% of the cases.
    - Initial bleeding is not usually profuse enough to cause death; it spontaneously ceases, only to recur later.
    - The first bleed occurs (on average) at 27-32 weeks' gestation.Contractions may or may not occur simultaneously with the bleeding.

Physical:

- Profuse hemorrhage
- Hypotension
- Tachycardia
- Soft and nontender uterus
- Normal fetal heart tones (usually)
- Vaginal and rectal examinations are not performed as may provoke uncontrollable bleeding.

Screening and diagnosis:

While clinical acumen remains vitally important in suspecting and managing placenta praevia, the definitive diagnoses of most low-lying placentas is now achieved with ultrasound imaging. Clinical suspicion should, however, be raised in any woman with vaginal bleeding and a high presenting part or an abnormal lie ,irrespective of previous imaging results.

Transvaginal ultrasound is safe in the presence of placenta praevia and is more accurate than transabdominal ultrasound in locating the placenta.

A reasonable antenatal imaging policy is to perform a transvaginal ultrasound scan on all women in whom a low-lying placenta is suspected from their transabdominal anomaly scan (at approximately 20–24 weeks) to reduce the numbers of those for whom follow-up will be needed.

A further transvaginal scan is required for all women whose placenta reaches or overlaps the cervical os at their anomaly scan as follows:

- Women who bleed should be managed individually according to their needs.
- In cases of asymptomatic suspected minor praevia, follow-up imaging can be left until 36 weeks.
- In cases with asymptomatic suspected major placenta praevia, a transvaginal ultrasound scan should be performed at 32 weeks, to clarify the diagnosis and allow planning for third-trimester management and delivery.

Placental migration occurs during the second and third trimesters,[23–25] owing to the development of the lower uterine segment, but it is less likely if the placenta is posterior[26] or if there has been a previous caesarean section.[24] A retrospective review of 714 women with placenta praevia found that, even with a marginal 'praevia' at 20–23 weeks (i.e. the edge of the placenta reached the internal cervical os), the chance of persistence of the placenta praevia requiring abdominal delivery was 11% with no uterine scar and 50% with a previous caesarean section.[24] For these reasons, a third-trimester follow-up scan is needed to confirm the diagnosis and plan further care. In the case of asymptomatic women in whom the placental edge has only reached or just overlapped the cervical os at the second trimester scan, with anticipated minor placenta praevia, a scan should be performed at 36 weeks.[29] Those suspected of major placenta praevia require clarification of the diagnosis earlier to enable counselling and careful planning.This should be taken into account in the timing of the follow-up scan, which should be conducted at around 32 weeks. Placentas still diagnosed as complete praevia at this gestation remain so in 90% of cases[24]

Diagnosis of a morbidly adherent placenta:

The placenta can attach directly to the myometrium (accreta), invade the myometrium (increta), or penetrate the myometrium (percreta). Antenatal imaging by colour flow Doppler ultrasonography should be performed in women with placenta praevia who are at increased risk of placenta accreta. Women with placenta praevia are at increased risk of having a morbidly adherent placenta if they have an anterior placenta praevia and have previously been delivered by caesarean sectionespecially when there has been a short caesarean to conception interval.

Antenatal management:

Women with major placenta praevia who have previously bled should be admitted 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. Any home-based care requires close proximity with the hospital, the constant presence of a companion and full informed consent from the woman. It should be made clear to any woman being managed at home that she should attend hospital immediately if she experiences any bleeding, any contractions or any pain (including vague suprapubic period-like aches).

Prior to delivery, all women with placenta praevia and their partners should have had antenatal discussions regarding delivery, haemorrhage, possible blood transfusion and major surgical interventions, such as hysterectomy, and any objections or queries dealt with effectively

The use of cervical cerclage to reduce bleeding and prolong pregnancy is not backed up by sufficient evidence to recommend this practice outside of a clinical trial.

Tocolysis for treatment of bleeding due to placenta praevia can be useful in selected cases. However betamimetics were used in the studies to date and, as these are known to be associated with significant side effects, the agent and optimum regime are still to be determined: further research is needed in this area.

Delivery:

The mode of delivery should be based on clinical judgement supplemented by sonographic information. A placental edge less than 2 cm from the internal os is likely to need delivery by caesarean section, especially if it is posterior or thick. Women with placenta praevia who have had a previous caesarean section are at high risk of having a morbidly adherent placenta and should have been imaged antenatally. When placenta accreta is thought to be likely, consultant anaesthetic and obstetric input are vital in planning and conducting the delivery. Crossedmatched blood should be available and colleagues from other specialties/ subspecialties may be alerted to be on standby to attend as needed. In the case of placenta accreta, increta and percreta, the risk of haemorrhage, transfusion and hysterectomy should be discussed with the patient as part of the consent procedure.