Original Article

Placenta Accrete

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Abstract

Placenta accreta occurs when all or part of the placenta attaches abnormally to the myometrium (the muscular layer of the uterine wall). Three grades of abnormal placental attachment are defined according to the depth of attachment and invasion into the muscular layers of the uterus.

Keywords: Placenta Accrete; Increta, Percreta.

INTRODUCTION

Placenta accreta occurs when all or part of the placenta attaches abnormally to the myometrium (the muscular layer of the uterine wall). Three grades of abnormal placental attachment are defined according to the depth of attachment and invasion into the muscular layers of the uterus.
Accreta – chorionic villi attach to the myometrium, rather than being restricted within the decidua basalis.
Increta – chorionic villi invade into the myometrium.
Percreta – chorionic villi invade through the perimetrium (uterineserosa).

Because of abnormal attachment to the myometrium, placenta accreta is associated with an increased risk of heavy bleeding at the time of attempted vaginal delivery. The need for transfusion of blood products is frequent, and surgical removal of the uterus (hysterectomy) is sometimes required to control life-threatening bleeding.[1]
Rates of placenta accreta are increasing. As of 2016, placenta accreta affects an estimated 1 in 272 pregnancies.[2]

Risk factors

An important risk factor for placenta accreta is placenta previa in the presence of a uterine scar. Placenta previa is an independent risk factor for placenta accreta. Additional reported risk factors for placenta accreta include maternal age and multiparity, other prior uterine surgery, prior uterine curettage, uterine irradiation, endometrial ablation, Asherman syndrome, uterine leiomyomata, uterine anomalies, hypertensive disorders of pregnancy[citation needed], and smoking.

The condition is increased in incidence by the presence of scar tissue i.e. Asherman's syndrome usually from past uterine surgery, especially from a past dilation and curettage,[3] (which is used for many indications including miscarriage, termination, and postpartum hemorrhage), myomectomy,[4] or caesarean section. A thin decidua can also be a contributing factor to such trophoblastic invasion. Some studies suggest that the rate of incidence is higher when the fetus is female.[5] Other risk factors include low-lying placenta, anterior placenta, congenital or acquired uterine defects (such as uterine septa), leiomyoma, ectopic implantation of placenta (including cornual pregnancy).[6][7][8]

Pregnant women above 35 years of age who have had a Caesarian section and now have a placenta previa overlying the uterine scar have a 40% chance of placenta accreta.[9]

Pathogenesis

The placenta forms an abnormally firm and deep attachment to the uterine wall. There is absence of the decidua basalis and incomplete development of the Nitabuch's layer.[10] There are three forms of placenta accreta, distinguishable by the depth of penetration.

Complications

1. Damage to local organs (e.g., bowel, bladder,uterus and neurovascular structures in theretroperitoneum and lateral pelvic sidewalls from placental implantation and its removal;
2. Postoperative bleeding requiring repeated surgery;
3. Amniotic fluid embolism;
4. Complications (such as dilutional coagulopathy, consumptive coagulopathy, acute transfusion reactions, transfusion-associated lung injury, acute respiratory distress syndrome, and electrolyte abnormalities) caused by transfusion of large volumes of blood products, crystalloids, and other volume expanders;
5. Postoperative thromboembolism, infection, multisystem organ failure, and maternal death.
6. The exact incidence of maternal mortality related to placenta accreta and its complications is unknown, but it is significant,[14] especially if the urinary bladder is involved[15]

Uterine artery Doppler ultrasound

Uterine arteries are the vessels that carry blood to your womb (uterus). A uterine artery Doppler ultrasound measurement is used to check the blood flow between you and your baby. It can be carried out during an ultrasound scan.

The Doppler measurement uses sound waves to check if the blood is flowing easily (low resistance) or whether it is having to work harder to flow (raised resistance).

What do the results mean?

A low resistance measurement means that a good/steady amount of blood is reaching your baby, helping it to continue to grow well. It also reduces the chances of you developing pre-eclampsia (a blood pressure condition).

Sometimes the measurement will show a raised resistance. This suggests that there is more chance of your baby not growing as well as expected, or of you developing pre-eclampsia. It is important to understand that this does not mean that this will happen, only that it is more likely.

If your measurements show a raised resistance we will offer you additional monitoring, scans and hospital or midwife appointments during your pregnancy. This means that if problems do arise they can be picked up as early as possible.

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