

Placental lakes

Patient Information Series – What you should know, what you should ask.

What are placental lakes?

Placental lakes are well-demarcated vascular spaces within the placenta which appear darker (hypoechoic) than the surrounding tissue. They might present in different sizes and shapes, and their content might vary but normally they are filled with maternal venous blood. Their presence increases the risk of placental dysfunction with manifestations such as intrauterine growth restriction and/or massive obstetric haemorrhage at birth.

What causes placental lakes?

Multiple mechanisms have been proposed to explain the formation of placental lakes. Some suggest it might arise from an abnormal response of the uterus to the vascular alternations in early pregnancy as a consequence of an incomplete transformation of the spiral arteries, others believe they result from traumatic insults to the feto-placental interface. Clots (thrombi) and haemorrhage from the rupture of villous capillaries can also give rise to these haematomas. Previous caesarean section and other surgeries involving the uterine wall, the presence of an abnormally invasive placenta, a thickened and/or inflamed placenta and recurrent antepartum haemorrhages in early pregnancy have all been suggested as risk factors for the formation of placental lakes.

How are placental lakes diagnosed? Should I have more tests done?

The diagnosis of placental lakes is normally made with 2D ultrasound, ideally between 18-20 weeks. Adding real-time colour Doppler allows for further assessment of the vascular flow. Intra-placental lakes and larger subchorionic haematomas can be diagnosed by ultrasound as hypoechoic spaces (darker than the surrounding tissue) with almost no sign of vascular flow. On the contrary, placental lakes with high-velocity blood flow and feeding vessels from the myometrium should raise the suspicion of abnormally invasive placentation and prompt further investigation. Magnetic resonance imaging has recently been added into the work-up of these highly suspicious lesions and might be offered if an abnormally invasive placenta is suspected.

What is the prognosis?

The prognosis of placental lakes is variable, and depends on the size, location, blood flow and underlying pathology. Placental lakes which present in small numbers, are less than 5 cm in size and irregular in shape in low-risk populations do not seem to carry a higher risk of adverse perinatal outcome. Whereas pregnancies with larger and more extensive placental lakes (>5 cm), there is an increased risk of uteroplacental complications such as intrauterine growth restriction, maternal hypertensive disorders, and poorer neonatal outcomes.

The risks are significantly different if the placental lakes are identified in the context of a placenta previa and/or abnormally invasive placenta as these conditions are associated with increased risk of massive obstetric haemorrhage, admission to intensive care and the need for a peripartum hysterectomy.

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What this means for my pregnancy?

If placental lakes are diagnosed during your 20-week scan, you might be offered extra regular ultrasound checks during your pregnancy to ensure baby is growing well. If no other placental alterations are found and there are no concerns about your baby's wellbeing, the presence of placental lakes on itself is unlikely to warrant a change in the mode and timing of birth.

What other questions should I ask?

- Are there any other placental abnormalities on the ultrasound?
- How often should I have ultrasound examinations?
- Is my baby growing well?
- Where should I deliver?

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