

Monoamniotic twin pregnancy

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

What is a monoamniotic twin pregnancy?

This is a type of twin pregnancy defined by the presence of a single shared placenta between the two fetuses and a single shared amniotic sac.

How does a monoamniotic twin pregnancy happen?

It is a rare condition that happens in about 1 per 10,000 pregnancies. It usually results from a single fertilized egg, with the embryo splitting into two separate embryos between 8 and 13 days after fertilization. Sometimes, in cases of pregnancies characterized by the presence of a single shared placenta but two different amniotic sacs, monoamniotic pregnancy may be the result of a rupture between the membrane dividing the two sacs.

What are the risks associated to this condition?

Monoamniotic twins are at higher risk of death of one or both twins. In addition, they are at higher risk of congenital malformations, especially abnormalities of the heart. They are also at much higher risk of being born early.

Moreover, monoamniotic pregnancies may develop some conditions related to the fact that twins share the same placenta and sometimes this sharing may be unbalanced, thus causing problems to both twins. Also, as there is no membrane dividing the twins, another important complication is the cord entanglement, when the umbilical cords of the two fetuses become intertwined or wrapped around each other inside the womb. This may increase the risk of death and as such these twins are monitored closely, and prolonged hospitalization is often instituted in the third trimester.

Monoamniotic twins have similar or lower risk of having an aneuploidy compared to singleton pregnancies (genetic condition characterized by an abnormal number of chromosomes, such as trisomy 21 which is known as Down's Syndrome).

Should I have more tests done?

Monoamniotic twin pregnancies need to be monitored more often than singleton pregnancies and other types of twin pregnancies, especially in the third trimester. The frequency of monitoring and whether this takes place as an in-patient or out-patient will be decided by your obstetric care provider.

Moreover, a fetal echocardiography (specific ultrasound that closely studies the heart of the twins) is suggested and fetal magnetic resonance might be useful in some cases, especially if structural differences are suspected in the babies.

When and how will I deliver the babies?

For monoamniotic pregnancies, international guidelines recommend elective preterm cesarean delivery at 32-34 weeks of gestation.

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What are the neonatal complications?

The neonatal complications in monoamniotic pregnancies are essentially related to prematurity. The rate of composite morbidity has been showed to be about 46% and is mainly related to respiratory morbidity, with two third of newborns admitted to neonatal intensive care unit, regardless of gestational age at delivery. Also, monoamniotic pregnancies carry a higher risk of developing congenital anomalies compared to either singleton and dichorionic and monochorionic diamniotic pregnancies, and in particular congenital cardiac defects.

What other questions should I ask?

- Are the babies growing in the same way?
- Do they have different structural anomalies?
- Where should I be followed?
- Where should I deliver?
- Where will the babies receive the best care after they are born?
- Can I meet the team of doctors that will be assisting my babies when they are born in advance?