

First trimester fetal heart – normal sonogram

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

What is the prevalence of congenital heart defects?

Congenital heart defects account for nearly one third of babies with major congenital anomalies diagnosed prenatally or in infancy in Europe. Great advances in treatment in recent decades have led to a decrease in infant mortality.

Why is it important to evaluate the heart in the first trimester?

Early detection or suspected major cardiac abnormality allow more time for referral in cases where patients need to travel long distances to specialized centers. It allows more time for a detailed and comprehensive investigation of the case, including chromosomal and genetic assessment.

More recently, with in utero treatment techniques, early detection of cardiac defects opens an opportunity to select fetuses who would benefit from this kind of therapy. It can also be reassuring to parents by excluding a major congenital heart defect in apparently normal cases with a high negative predictive value. However, a first-trimester evaluation does not replace the second-trimester echocardiography that currently is performed for high-risk patients, because a small percentage of congenital heart defects have the potential to evolve past the first trimester.

The scan to evaluate the heart in the first trimester is usually performed transabdominally or transvaginally. The scan must be performed between 11 and 13 weeks + 6 days of pregnancy when your baby measures between 45-84mm in length, during the routine first-trimester fetal ultrasound scan.

What happens if there is suspicion of a cardiac defect?

If any suspicious findings are seen during the scan, the person performing the scan may refer you to a specialist. Complete evaluation of the fetal heart in the first trimester is not part of the basic examination, although the basic assessment and the use of routine markers such as nuchal translucency, tricuspid regurgitation, and ductus venosus pulsatility index can be very helpful. Other views of the fetal heart may be needed, and a specialized cardiac scan could be scheduled.

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