Significance of absent or reverse diastolic flow in the umbilical artery Doppler as the only alteration in the evaluation of fetal well-being in fetuses with trisomy 21

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**Abstract**

Evaluation of fetal well-being is a clinical challenge. The finding of absent or reverse diastolic flow (ADF/RDF) in the umbilical artery Doppler velocimetry is considered a sign of placental insufficiency. However, it is possible to find ADF/RDF without placental insufficiency in trisomy 21 fetuses. A clinical case of a pregnant woman having a suspected Down syndrome fetus, with ADF/RDF in the umbilical artery Doppler, without any other alteration in fetal well-being tests with no signs of hypoxia at birth, but with a congenital heart disease is reported. Few cases have been reported showing similar findings, postulating that umbilical artery Doppler with ADF/RDF may be caused by congenital heart disease. Maternal fetal medicine specialists have faced situations like this but they don't know scientific evidence supporting expectant management in these patients. We conclude that fetuses with Down syndrome and ADF/RDF in umbilical artery Doppler should be carefully evaluated by congenital heart disease but keeping a high suspicion of placental insufficiency and acting according to that.

**Keywords** Absent or reverse diastolic flow, Congenital heart disease, Trisomy 21