



Fetoscopic findings of poor prognosis in selective fetal growth restriction type II

Gil Guevara E, Diaz R, Chavez S, Lim F, Peiro JL

British American Hospital, Lima, Peru

Objective

To describe a fetoscopic finding of ominous prognosis during Laser ablation of placental anastomoses in monochorionic diamniotic (MCDA) twin pregnancies complicated with Selective Fetal Growth Restriction (sFGR) type II: changing color in a placental arteriovenous (AV) anastomosis.

Methods

This was an observational retrospective study, in which we checked the recordings of the surgeries we performed for isolated Selective FGR type 2 (no superimposed TTTS) in MCDA twin pregnancies at three different centres: Lima, Peru; Quito, Ecuador; and Cincinnati, USA. We identified 9 cases where Laser separation of placental circulations was performed in view of the rapid deterioration of the small twin and among the identified anastomoses during fetoscopy, one AV anastomosis, from the sick fetus to the normal one, showed a fluctuant color, between bright red and dark purple, which is rare in this type of anastomoses, that usually have unidirectional flow.

Results

In 8 of the 9 cases, there was intrauterine demise of the sick twin within the next 4 weeks after surgery. In 2 of them there was double demise and only in 1 of the 9 there was double survival. The mean gestational age at delivery was 35 weeks with a 33% rate of preterm rupture of membranes. The changing color in the AV anastomosis was due to the low central blood pressure of the pre-mortem small twin, which made the pressure in its chorionic arterial branch too low to overcome the pressure of the chorionic vein branch of the normal twin at the level of the AV anastomosis.

Conclusion

MCDA twin pregnancies complicated with Selective FGR type II, that demonstrated during fetoscopic surgery, a fluctuant change of color at the level of an AV anastomosis, had a high mortality rate of the small twin. We report a fetoscopic sign of poor prognosis for the growth-restricted twin: an AV anastomosis with an atypical bidirectional flow.