Abstract:

To evaluate the incidence of chorioamniotic membrane separation (CMS) after fetoscopy in monochorionic diamniotic (MCDA) twins and its impact on pregnancy outcome. The study group comprised a consecutive series of 338 women with an MCDA pregnancy complicated by twin-twin transfusion syndrome (TTTS) or selective intrauterine growth restriction (sIUGR) treated with selective laser photocoagulation of communicating vessels (SLPCV) or cord occlusion (CO). Data obtained included cervical length, gestational age at procedure, type and duration of surgery and placental location. The incidence of CMS, the rates of miscarriage and preterm prelabor rupture of membranes (PPROM), gestational age at delivery and neonatal survival were recorded. Of the study population of MCDA pregnancies, 270 (79.9%) had TTTS and 68 (20.1%) had sIUGR. SLPCV was performed in 252 (74.6%) cases and CO in 86 (25.4%). Postoperative CMS was observed in 70 (20.7%) cases. Patients with CMS had higher rates of miscarriage (14.3% vs 7.1%; P = 0.049), PPROM before 32 weeks (43.3% vs 13.7%; P< 0.001) and preterm delivery before 32 weeks (53.3% vs 26.1%; P< 0.001) and a lower rate of neonatal survival of at least one twin (81.7% vs 93.6%; P = 0.003). Multivariate analysis showed that gestational age at surgery was the only independent predictor, with
the highest proportion of CMS occurring in cases that underwent surgery before 18 weeks' gestation (odds ratio, 2.941 (95% CI, 1.640-5.275); P < 0.001). There was no influence of cervical length, placental location, duration of surgery or type of surgery on the risk of CMS. CMS complicated one-fifth of all MCDA pregnancies that underwent fetoscopy. It appeared to be more common in those who underwent surgery before 18 weeks' gestation and was associated with poorer outcomes.

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