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The role of ultrasonography in the diagnosis of fetal isolated complete agenesis of the corpus callosum: a long-term prospective study.

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Abstract

OBJECTIVE: To evaluate the role of a dedicated neurosonographer in prenatal diagnosis of isolated complete agenesis of the corpus callosum (iCACC) and to assess the postnatal outcome of these infants.

METHODS: Prospective study between January 2004 to December 2004 at Fetal Maternal Medical Centre 'Artemisia', Rome, Italy. A detailed ultrasound scan was performed in fetuses affected by iCACC by a dedicated fetal neurosonographer (CG). In all cases, magnetic resonance imaging (MRI) within 5 weeks and 13-15 months after birth was performed. A comparison was made between prenatal findings following the ultrasound scan and postnatal MRI. In these cases, a follow-up of 4-years was performed with a neurological evaluation.

RESULTS: Among 23 cases of ACC diagnosed at our centre in the study period, CACC was diagnosed in 17 fetuses. Two were then excluded due to associated malformations, one was lost at follow-up and one patient opted to terminate her pregnancy. Newborn MRI confirmed the ultrasonographic diagnosis of iCACC in all 13 cases. A regular development was present in 92.3% of prenatally diagnosed iCACC.

CONCLUSION: A dedicated neurosonographer could diagnose the iCACC with the same accuracy as MRI and in up to 90% of cases the newborn will have a regular development.

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