

## Prenatal diagnosis of congenital head, face, and neck malformations-Is complementary fetal MRI of value?

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### Objective

The aim of this study was to evaluate the role of fetal magnetic resonance imaging (MRI) as a complement to ultrasound (US) in the prenatal diagnosis of craniofacial anomalies.

### Methods

A historical cohort study including all pregnant women who were referred for fetal MRI because of antenatal diagnosis of craniofacial anomalies on screening US. Prenatal diagnostic US, MRI, and postnatal diagnosis were compared for consistencies and discrepancies.

### Results

Forty-five pregnant women with 73 suspected fetal craniofacial anomalies diagnosed by US underwent MRI. In 40 out of 73 anomalies (54.8%), US and MRI findings were in complete agreement with postnatal diagnoses. MRI correctly ruled out the diagnosis of 24 anomalies suspected on US and diagnosed four additional pathologies that were not demonstrated by US. Out of the 85 anomalies (suspected by imaging or confirmed postnatally), confident diagnosis could be made by MRI in 68 anomalies (80%), not diagnosed in 10 (11.8%), and over-diagnosed in seven (8.2%). By US, confident diagnosis could be made in 44 anomalies (51.8%), not diagnosed in 11 (12.9%), and over-diagnosed in 30 (35.3%).

### Conclusion

MRI is valuable in the antenatal evaluation of fetal craniofacial anomalies and may be useful as an adjunct to US in the prenatal work-up of craniofacial anomalies.