To review our experience of fetal brain ane¬malities where MRI had been performed as an adjunct to ultrasound, separate out those that were considered destructive rather than malformative, and determine the underlying etiology for each case.

A retrospective review of all fetal MRI cases was performed using an established ten year dataset. Review included pre- and postnatal imaging, laboratory testing, and postnatal follow-up where available.

From a total of 237 cases, 17 cases were identified where the cause was reasonably ascertained to be destructive rather than malformative. These could be grouped into the following categories: hemorrhagic (5 cases), infectious (1 case) metabolic (1 cases) hypoxic-ischaemic (4 cases) and embolic (6 cases). Selected cases from each category, with relevant pre- and postnatal imaging by US, CT and MRI, are presented, including hydrocephalus, Dandy-Walker syndrome, perinatal embolic stroke, arteriovenous malformation, cytomegalovirus, pyruvate dehydrogenase deficiency, schizencephaly, twin-twin transfusion syndrome and hydranencephaly. Approximately one third of all cases (6) were in monochorionic twin pregnancies.

**CONCLUSIONS**

1. A spectrum of etiologies is demonstrated, namely: Hemorrhagic, Infectious, Metabolic, Hypoxic-ischemic and Embolic.

2. A disproportionate number of cases (33%) were associated with monochorionic twin pregnancies.

3. Fetal intraventricular hemorrhage is recognized as a potential etiology in Dandy-Walker spectrum.

**Materials & Methods**

**Purpose**

To review our experience of fetal brain anomalies where MRI had been performed as an adjunct to ultrasound, separate out those that were considered destructive rather than malformative, and determine the underlying etiology for each case.

**Results**

From a total of 237 cases, 17 cases were identified where the cause was reasonably ascertained to be destructive rather than malformative. These could be grouped into the following categories: hemorrhagic (5 cases), infectious (1 case) metabolic (1 cases) hypoxic-ischaemic (4 cases) and embolic (6 cases). Selected cases from each category, with relevant pre- and postnatal imaging by US, CT and MRI, are presented, including hydrocephalus, Dandy-Walker syndrome, perinatal embolic stroke, arteriovenous malformation, cytomegalovirus, pyruvate dehydrogenase deficiency, schizencephaly, twin-twin transfusion syndrome and hydranencephaly. Approximately one third of all cases (6) were in monochorionic twin pregnancies.