Cardiac arrhythmias affected five antenatally-diagnosed fetuses (56%), with one requiring emergency delivery at 28 weeks and ongoing neonatal management.

The majority of cardiac rhabdomyomas in both groups were located in the ventricles. Tumour growth continued up to 28 weeks of age amongst all surviving children, followed by spontaneous regression, with no need for resective surgery. There was a high prevalence of neurological morbidity in both groups.

**Conclusion** Antenatal cardiac rhabdomyomas, occurring as part of the TSC, can cause significant morbidity, which is rarely fatal, but warrants careful monitoring until the point of tumour regression. The burden of neurological disease is high in children, compared with the largely favourable cardiac outcome.

**Abstracts**

**Fetal Macrosomia: A Retrospective Observational Study**

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**Objectives** Maternal obesity is one of the biggest challenges facing modern obstetrics. The focus of this study was to investigate whether speculation that fetal macrosomia may be on the rise as a consequence of rising levels of maternal obesity and to observe if there was an increase in complications as a result of fetal macrosomia, which is defined as a birth weight of 4.0 kg and above.

**Method** A retrospective observational study of all babies weighing 4.0 kg or more born in 2011 at Royal Derby Hospital. Data was collected on maternal parameters such as BMI, fasting glucose and glucose tolerance test, gestation at delivery, delivery outcomes, neonatal birth weight, Apgar scores and their overall outcome. The data was then compared to data from both 2001 and 1991 recovered from the hospital archives.

**Results** In 2011, 11.1% of the total babies born that year had a birthweight of ≥ 4.0 kg. In 2001, 10.3% and in 1991, 10.7%. The average BMI of women who gave birth to a baby weighing ≥ 4.0 kg in 2011 was 28.

**Conclusion** Although there is speculation that fetal macrosomia is on the rise, in association with gestational diabetes and a rise in maternal BMI, we found that over the last 20 years the number of macrosomic babies has not increased at the Royal Derby Hospital. The overall maternal BMI was only slightly higher than average and deliveries involving macrosomic babies were not complicated by a higher rate of caesareans sections or instrumental deliveries or obstetric complications.

**Management and Outcome of Vasa Praevia: A Ten Year Review**

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**Introduction** Vasa Praevia (VP) describes fetal vessels coursing through the membranes over the internal os, unprotected by placental tissue or umbilical cord. VP is associated with significant fetal risk when membrane rupture occurs. The RCOG guideline on VP recommends antenatal admission from 28–32 weeks until delivery in a unit with appropriate neonatal facilities to facilitate quicker intervention in the event of bleeding or labour.

**Aim** To review the management and outcome of VP cases at a tertiary teaching hospital.

**Methods** We undertook a ten year retrospective review (2002 to 2012) of all cases of confirmed VP. Cases were identified using the discharge codes of all inpatient episodes and the fetal medicine unit database. We reviewed the ultrasound scans and notes of all cases.

**Results** We identified 15 confirmed cases of VP. 14 cases were diagnosed antenatally. The median GA at diagnosis was 25+3 weeks. 9 cases were admitted antenatally (duration: 2 days to 5 weeks). None of the admitted cases went into labour.

11/15 cases had elective LSCS and 4/15 had emergency LSCS (2/4 had category 1 LSCS). The median GA at delivery was 37+3 weeks. The single undiagnosed case resulted in neonatal death secondary to VP.

**Conclusions**

1. VP is a rare condition.
2. A high proportion of cases were diagnosed antenatally, however there may be cases which were never diagnosed and did not cause adverse events.
3. Further evidence is needed on the necessity and timing of antenatal admission.

**Neonatal Hypophosphatasia: A Rare Disorder and New Treatment**

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Hypophosphatasia is a rare inborn error of metabolism resulting from mutations in the gene for the tissue-nonspecific isozyme of alkaline phosphatase (TNSALP). There is deficiency of alkaline phosphatase activity leading to severe rickets/osteomalacia. Severely affected babies die from respiratory insufficiency. There is no licenced medical treatment available. We report a case diagnosed