and is one of the largest series available. These pregnancies can go undiagnosed antenatally if anomaly screening is not undertaken. While many die in-utero, postnatal survival is also possible.

PF.53 DO COMPUTERISED CARDIOTOGRAPH RESULTS CHANGE MANAGEMENT DURING PREGNANCY FOR WOMEN WITH DIABETES WHO HAVE A MACROSOMIC FETUS DIAGNOSED BY ULTRASOUND EXAMINATION?

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[1]H Auchterlonie, [2]D Farrar, [1]D Tuffnell. *[1]Bradford Women's and Newborn Unit, Bradford, UK; [2]Bradford Institute for Health Research, Bradford, UK*

Background Pregnancy complicated by diabetes causes concern for the health of the fetus particularly when ultrasound examination indicates macrosomia. This has led clinicians (in the absence of beneficial evidence) to instigate fetal surveillance. All women with diabetes at the Bradford Women's and Newborn unit are offered twice weekly computerised cardiotographs (CTG) if on ultrasound scan their fetus has an abdominal circumference >95th centile. Our aim was to investigate if this policy affected the management and outcomes for women with diabetes.
Method A retrospective three year analysis of all women with diabetes, with an USS indicating fetal macrosomia, who attended hospital for routine CTG between 2009 and 2011.
Results One hundred pregnancies were identified. 83 women had pre-existing and 17 had gestational diabetes (GDM). 26 cases had a total of 48 failed CTGs of which 38 failed only because of an absence of high variation. Of the women with pre-existing diabetes, 11 (13%) had one or more failed CTGs, of the women with GDM 15 (88%) had one or more failed CTGs. Only three women received an intervention following a failed CTG. Risk of admission to special care was unaffected by CTG results. One woman with 4 failed CTGs out of 11 suffered a stillbirth and one woman who had no failed CTGs suffered a stillbirth.
Conclusion Surveillance of fetal wellbeing in women with diabetes with a macrosomic infant using computerised CTGs does not seem to affect management of pregnancy or perinatal outcomes. Repeated CTGs do not seem to be of benefit in maternal diabetes.

PF.54 ACCURACY OF FETAL IMAGING FOR THE DETECTION OF SEVERE ABNORMALITIES IN EARLY GESTATION

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[1]C Iruloh, [1]M Singh, [2]C Peres, [2]M Cohen, [1]D Anumba. *[1]Jessop Hospital for Women, Sheffield, UK; [2]Department of Perinatal Pathology, Sheffield Children's Hospital, Sheffield, UK*

Background Women with pregnancies with suspected fetal anomalies are routinely referred to fetal medicine units for management. Some of these pregnancies end in spontaneous fetal loss or termination of pregnancy.
Objective We sought to determine the accuracy of antenatal detection of lethal fetal structural abnormalities by ultrasound following fetal loss evaluated by fetal postmortem.
Study design We retrospectively reviewed registry data of consecutive fetal autopsies, before 24 weeks gestation, performed in a regional perinatal pathology service in South Yorkshire England over a 5 year period comparing the postmortem findings to the antenatal diagnosis made in the regional fetal medicine unit which informed parental decisions. A subset of women who had antenatal care locally has been analysed.
Results There were 81 fetal postmortems of which 32% of the anomalies were diagnosed in the first trimester and 68% in the second trimester. Ninety-eight per cent were full postmortems. There was full agreement between antenatal and post-mortem findings in 86% of the cases. There was partial or major disagreement in 9% and 5% of the cases respectively. With the major disagreements, the postmortem findings could result in modification of the postnatal counselling for recurrence and management of subsequent pregnancies.
Conclusion Antenatal ultrasound detected 86% of the fetal abnormalities for which parents opted for pregnancy termination or which led to spontaneous miscarriage. Postmortems not only provide reassurance of the antenatal diagnosis but also modify the management of future pregnancies.

PF.55 INTRAUTERINE TRANSFUSION FOR PARVOVIRUS B19 INFECTION OVER LAST DECADE

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P Wu, AD Cameron, JL Gibson, J Brennand, MA Ledingham. *The Ian Donald Fetal Medicine Unit, Southern General Hospital, Glasgow, UK*

Intrauterine transfusion (IUT) cases for Parvovirus B19 infection over 2002–2011 were reviewed. Our unit receives referrals from Scotland and Northern Ireland. Most were referred in 2008 (n = 5) and 2009 (n = 7). In other years there were <3 cases.

Thirty patients underwent 48 IUTs (mean 1.6, range 1–3). Twenty-six fetuses had middle cerebral artery Doppler peak systolic velocity values documented. All were >1.5 multiples of median prior to first IUT. At initial assessment, 25 fetuses were hydropic and 4 had ascites. Pre-IUT haematocrit value was available in 27 pregnancies: <10% in 15 and 10–19% in 5 cases, in keeping with fetal anaemia. Initial IUT was most frequently performed between 21–24 (n = 13) followed by 17–20 weeks gestation (n = 9) (range 17–32 weeks).

Intrauterine or neonatal death occurred in 9 hydropic fetuses that had bradycardia, thrombocytopenia, difficult procedure or severe anaemia. No reasons were identified in 2 cases. However, these did not have pre-transfusion haematocrit values. Seven procedures had other complications e.g. cord haematoma, technically difficult, bradycardia and spontaneous rupture of membranes. This pregnancy was conservatively managed with a live birth at 36 weeks gestation.

Live births occurred in 14 pregnancies. Seven women were lost to follow-up. Improved capture of outcome data is required. Short term outcomes were available in 8 neonates: 6 required no treatment, 1 had phototherapy and 1 had a neonatal death. We conclude that poor outcomes following IUT can be predicted at the time of procedure and that IUT can rescue a fetus destined for intrauterine loss to a healthy outcome.

PF.56 CARDIAC RHABDOMYOMAS IN FETAL LIFE AND BEYOND: A SINGLE CENTRE 15-YEAR EXPERIENCE

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M Walsh, J Te Water Naude, O Uzun. *University Hospital of UK UK, Cardiff, UK*

Aim This study describes the immediate complications and outcome of children with antenatally-diagnosed cardiac rhabdomyomas, arising as a consequence of the tuberous sclerosis complex (TSC). This group is compared with those diagnosed after birth.
Method The paediatric cardiology database was interrogated to identify children with cardiac rhabdomyomas: twenty-one cases were analysed, with nine diagnosed antenatally and twelve after birth.
Results Cardiac complications were identified in ¾ of the antenatal group (7 out of 9), compared with a third of the postnatal group (p = 0.08). The commonest antenatal abnormality identified was an outflow tract obstruction, which affected six fetuses. Two significant cases included an intrauterine death at 36 weeks gestation and an induction of labour at 38 weeks, due to a haemodynamically significant left ventricular outflow tract obstruction.

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.

PF.57 FETAL MACROSOMIA: A RETROSPECTIVE OBSERVATIONAL STUDY

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G Argentesi, KF Walker, S Raouf. *Royal Derby Hospital, Derby, UK*

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.

PF.58 MANAGEMENT AND OUTCOME OF VASA PRAEVIA: A TEN YEAR REVIEW

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T Kubba, F Ushakov, S Cicero, G Attilakos. *Department of Fetal Medicine, UCL and UCLH Institute for Women's Health, London, UK*

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.

PF.59 WHAT IS THE OPTIMAL DOSE OF LOW MOLECULAR WEIGHT HEPARIN IN PREGNANT WOMEN WITH RAISED BMI?

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[1]S Rahman, [2]D Stewart, [1]L Byrd, [1]C Tower. *[1]St. Mary's hospital, Manchester, UK; [2]Newcastle university medical school, Newcastle, UK*

Introduction Obesity is a risk factor for thromboembolism in pregnancy. Recent RCOG guidelines suggested a non-evidence based weight-dependent protocol in which monitoring of anti-Xa levels was not required. This contrasted with local guidelines which used BMI based dosing, using anti-Xa levels to determine correct dose with BMI > 35. We sought to investigate the impact of the different strategies in a cohort of women treated with antenatal thromboprophylaxis.

Methods We retrospectively audited the thromboprophylaxis practise amongst 42 women between September 2009 and September 2011. We observed tinzaparin dosing, frequency of anti Xa levels, dose changes, and pregnancy outcomes.

Results 39/42 (93%) had a BMI over 35 and had anti-Xa measurements. Using the local protocol 15/39 (38%) required dose increases and all patients received a higher dose than suggested by RCOG guidelines (median 3000 IU, interquartile range(1QR) 3000–5000 IU). There were no thrombotic events and 25/38 (66%) achieved a vaginal delivery. The median estimated blood loss at delivery was 350 ml (IQR 200–725 mls) and 3 women suffered a major PPH > 1500 mls.

Discussion All our patients received a higher tinzaparin dose than suggested by RCOG guidelines, but shown by anti-Xa monitoring to be therapeutic. In these small numbers, there was a high vaginal delivery rate (66%) and although 3 women suffered a major PPH, the median blood loss was within an acceptable range for this high risk population. Without appropriate monitoring, RCOG guidelines may be resulting in suboptimal anticoagulation in women with raised BMI, whilst exposing them to the risks and side effects of LMWH.

PF.60 NEONATAL HYPOPHOSPHATASIA: A RARE DISORDER AND NEW TREATMENT

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[1]S Hiremath, [1]VK Devendra Kumar, [2]R Padidela, [2]Z Mughal. *[1]Lancashire Women & Newborn Centre, Burnley General Hospital, Burnley, UK; [2]Central Manchester University Hospitals NHS Foundation Trust, Manchester, UK*

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