

exposure. Severe fetal thrombocytopenia was noted at the time of cordocentesis. Repeated intrauterine transfusions were required however fetal cardiac function deteriorated further which resulted in fetal demise.

Case 2: The second cases involved a 32 year old multip with confirmed Parvovirus infection who was referred with severe fetal hydrops. Severe thrombocytopenia was again noted however a successful fetal transfusion was performed. Unfortunately the mother subsequently developed Ballantyne (Mirror) syndrome which resolved with expectant management.

Case 3: The final case involved a 28 year old multip with a dichorionic twin pair both of which were severely anaemic with similar haematocrit levels at cordocentesis. Both twins received the same treatment course however different outcomes were encountered.

This case series demonstrates the various complications that add further challenging features to the management of pregnancies affected by Parvovirus infection.

**PF.65 WITHDRAWN BY AUTHOR**

**PF.66 PROGNOSTIC SIGNIFICANCE AN ENLARGED FETAL STOMACH IN THE SECOND TRIMESTER**

doi:10.1136/archdischild-2013-303966.074

J Richardson, S Boxall, J Stanwell, D Wellesley, K Brackley. *University Hospital Southampton NHS Foundation Trust, Southampton, UK*

**Introduction** Duodenal atresia classically presents with a “double bubble” sign and polyhydramnios in the third trimester. The significance of an enlarged stomach detected on a second trimester scan is unclear.

**Methods** A retrospective review of cases identified from the Wessex Fetal Medicine and Antenatally Detected Anomaly (WANDA) regional databases from 1995 to 2012. Scan reports were reviewed and correlated with outcome.

**Results** 33 cases of an enlarged stomach in the second trimester were identified. In nine there were additional major anomalies: four with gastroschisis, three with cardiac anomalies (including two trisomies), one severe growth restriction with dilated bowel loops and one with renal cystic dysplasia. In the 24 fetuses without additional major anomalies, five had early signs of a “double bubble” with the first part of the duodenum visible. Three (60%) had confirmed duodenal atresia after delivery, one with VATER syndrome and one with trisomy 21. In the 19 cases without an early “double bubble” sign, stomach enlargement resolved in eight (42%) and persisted in 11 (58%), one with polyhydramnios. In these 19 babies there was one neonatal death following preterm labour at 26 weeks post amniocentesis. In the 18 cases with postnatal follow up, there were no gastro-intestinal anomalies or feeding problems detected.

**Conclusions** The finding of an isolated enlarged stomach in the second trimester appears to have a good outcome with no associated feeding problems. However if an early “double bubble” sign is seen there is a significant risk of an underlying duodenal atresia.

**PF.67 THE INCREASED INCIDENCE OF ECHOGENIC LUNG LESIONS – AN 18-YEAR REVIEW FROM THE WESSEX REGION**

doi:10.1136/archdischild-2013-303966.075

<sup>1</sup>LJ Stocker, <sup>2</sup>D Wellesley, <sup>2</sup>R Parasuraman, <sup>2</sup>DT Howe. *<sup>1</sup>University of Southampton, Southampton, UK; <sup>2</sup>University Hospitals Southampton NHS Trust, Southampton, UK*

**Introduction** Echogenic lung lesions (ELL) are a heterogeneous group of lung abnormalities that display a variety of features and are inherently difficult to diagnose and characterise antenatally. Included in this group are congenital cystic adenomatoid malformations (CCAM), pulmonary sequestration, broncho-pulmonary atresia, and congenital emphysema.

**Objectives** To investigate the changing incidence of echogenic lung lesions detected both antenatally and postnatally.

**Methods** A retrospective review of cases identified from the Fetal Medicine database and the Wessex Antenatally Detected Anomalies (WANDA) congenital anomalies register from 1994 to 2011.

**Results** We identified a total of 111 cases of ELL in 492,559 births during the stated period. All but six cases were identified on antenatal ultrasound.

In 1994, the total incidence of ELL was 0.37 per 10 000 births. By 2011 this had risen to 5.39 per 10 000 births, with a progressive incline during the intervening years.

**Conclusion** We found a nearly 15-fold increase in the incidence of ELL found antenatally in the Wessex region between 1994 and 2011. It is unclear whether this is due to a true rise in the incidence of this abnormality, or due to increased antenatal recognition as a result of improved ultrasound resolution and operator experience.

**PF.68 TORCH SCREENING, WHERE ARE WE NOW?**

doi:10.1136/archdischild-2013-303966.076

<sup>1</sup>SM Halawa, <sup>1</sup>L McDermott, <sup>1</sup>ML Denbow, <sup>1,2</sup>M Donati. *<sup>1</sup>United Hospitals Bristol NHS trust, Bristol, UK; <sup>2</sup>Public Health Laboratory, Bristol, UK*

TORCH screening is used in pregnancy in a wide number of indications. In 1990 the Public Health Laboratory service advised that individual serology tests, rather than a TORCH screen, should be performed depending upon clinical circumstances<sup>1,2</sup>. Our group confirmed these findings for fetal medicine indications.<sup>1</sup> The aim of this retrospective study was to determine our progress with the use of TORCH in pregnancy.

**Methods** A retrospective review of all TORCH tests requested in St Michael's Hospital in obstetrics and gynaecology between 01/10/2006 and 31/01/2012 was undertaken via the pathology database.

**Results** 742 tests were undertaken over the study period. 40 indications were identified. There were 4 positive tests for CMV (1%), with no cases of confirmed toxoplasmosis or rubella. CMV was found in late miscarriage, recurrent miscarriage and multiple fetal abnormality.

**Conclusions** The incidence of toxoplasma in the UK is 1–2 infections per 1000 pregnancies<sup>3</sup> and is normally associated with a maternal illness. Rubella is screened for as part of the routine antenatal screen. Our findings have further confirmed the targeted approach to serology screening<sup>4</sup>. We therefore now only perform CMV serology unless there is an overwhelming clinical indication for the addition of toxoplasma testing.

**REFERENCES**

1. Abdel-Fattah SA, Bhat A, Illanes S, *et al*. TORCH test for fetal medicine indications; only CMV is necessary in the UK. *Prenat Diagn* 2005;25:1028-31.
2. PHLS. TORCH screening reassessed: the laboratory investigation of congenital, perinatal and neonatal infection. 1. UK: Public Health Laboratory Service, 1990.
3. Allain JP, Palmer CR, Pearson G. Epidemiological study of latent and recent infection by Toxoplasmosis Gondii in pregnant women in a regional population in the UK. *J Infect* 1998;36:189-96.
4. Fayyaz H, Rafi J. TORCH screening in polyhydramnios: an observational study. *J Matern Fetal Neonatal Med* 2012;25:1069-72.

**PF.69 IRELAND'S NATIONAL PERINATAL NEUROSURGICAL CLINIC: REFERRAL PATTERNS AND OUTCOMES, 2010–2012**

doi:10.1136/archdischild-2013-303966.077

<sup>1</sup>CA Walsh, <sup>1,4</sup>FM McAuliffe, <sup>2</sup>D Crimmins, <sup>3</sup>E Laffan, <sup>3</sup>V Donoghue, <sup>1</sup>S Higgins, <sup>1</sup>R Mahony, <sup>1</sup>S Carroll, <sup>1</sup>P McParland. *<sup>1</sup>Department of Fetal Medicine, National Maternity Hospital, Dublin, Ireland; <sup>2</sup>Department of Paediatric Neurosurgery, Children's University Hospital, Dublin, Ireland; <sup>3</sup>Department of Paediatric Radiology, National Maternity Hospital, Dublin, Ireland; <sup>4</sup>UCD School of Medicine and Medical Sciences, Dublin, Ireland*

**Background** Anomalies of the fetal central nervous system (CNS) require considerable expertise. In 2010 we launched a Perinatal Neurosurgical Clinic, wherein fetal CNS anomalies are assessed and counselled by a multi-disciplinary team, comprising a fetal medicine specialist, a paediatric neurosurgeon, a paediatric radiologist and a specialist nurse.

**Materials and Methods** A prospective review of all patients referred to our clinic from Jan 2010 to July 2012. All cases were triaged initially by a fetal medicine specialist to confirm diagnosis. If warranted, a fetal MRI was obtained prior to referral. Individual patient records were examined to determine pregnancy outcome.

**Results** Over the study period, 122 fetal CNS anomalies (excluding choroid plexus cysts) were seen. Of these, 41 women (34%) were referred to the Neurosurgical Clinic, including 1 case each of caudal regression syndrome, neuronal migration disorder, sacroccygeal teratoma, AV malformation, agenesis corpus callosum, cerebellar hypoplasia and thoracolumbar gibbus (*Table*). Median gestation at referral was 30.5 weeks. Three women opted for termination. Of the remaining cases, 53% underwent fetal MRI. In 35%, MRI was considered to alter the diagnosis and counselling. 60% of women underwent caesarean delivery, at a median 38.8 weeks. Excluding 3 cases of holoprosencephaly, the perinatal mortality rate in this high risk cohort was 0%.

Abstract PF.69 Table

Diagnosis	Total	Referred to Perinatal Neurosurgical Clinic
Ventriculomegaly	47	7
Neural Tube Defect	37	18
Holoprosencephaly	10	3
Dandy-Walker syndrome	19	4
Other	9	9
TOTAL	122	41

**Conclusion** A multi-disciplinary Perinatal Neurosurgical Clinic offers excellent potential, both in expert management of common CNS anomalies, such as neural tube defects, and in the assessment of much rarer fetal CNS anomalies.

**PF.70** **PRENATAL DIAGNOSIS, MAINTAINING HIGH STANDARDS: REFLECTIONS ON 200 CONSECUTIVE PROCEDURES**

doi:10.1136/archdischild-2013-303966.078

*MM Johnson, K Navaratnam, MG Davies. Southport and Ormskirk Hospitals, Ormskirk, UK*

**Aims** To assess the local compliance for CVS and Amniocentesis, with RCOG Green-top standards<sup>1</sup>. Additionally, examine the indications for prenatal diagnosis, results and outcomes.

**Background** 1:20 pregnant women in the UK are offered prenatal diagnosis, amounting to 30,000 procedures annually<sup>1</sup>. CVS is offered 11–13 weeks, Amniocentesis from 15 weeks<sup>1</sup>. Type and timing of

diagnostic test screening provided. Changes are predicted with adoption of combined first trimester screening for Down's Syndrome<sup>1</sup>.

**Methods** Retrospective case-note audit of 200 consecutive prenatal diagnosis cases, performed by operators in Ormskirk District General Hospital, with 3200 deliveries per annum.

**Results** 200 procedures (25 CVS, 175 Amniocentesis) performed with continuous ultrasound, by 2 experienced operators, from August 2007 to November 2011. Rate of pregnancy loss following any procedure was 1.7% (3 cases of amniocentesis), and 0.6% loss <14 days of procedure (1 Amniocentesis). All miscarriages were <20 weeks gestation. 5 CVS and 1 Amniocentesis required 2 attempts. Bloodstaining complicated one procedure clinically, and 11 cases were recognised by the lab. 20% CVS and 2.9% of amniocentesis had inadequate sample volumes. Overall culture failure was 1%. 2 women reattended with vaginal discharge, 1 with abdominal pain. There was one liquor leak, and one case of sepsis.

**Conclusions** Introduce continuous audit, with proforma for RCOG standards to be commenced at the procedure. Review results annually, use to inform patients, and develop the prenatal diagnosis service. Continue to train specialist registrars and sonographers, in a supportive environment for competency acquisition.

**REFERENCE**

1. RCOG. Amniocentesis and Chorionic Villus Sampling (Green-top 8). RCOG. 2010.

**PF.71** **WE HAVE DIAGNOSED VENTRICULOMEGALY – WHAT HAPPENS NEXT?**

doi:10.1136/archdischild-2013-303966.079

*L Lacey, P Satodia, H Mehta, S Mukherjee. University Hospital Coventry & Warwickshire, Coventry, UK*

Ventriculomegaly is defined as dilatation  $\geq 10$  mm of the fetal cerebral lateral ventricles on ultrasound at 20 weeks gestation<sup>1,2</sup>.

**Aim** To assess the aetiology and neurological outcomes of ventriculomegaly at a University hospital from 2009–2012.

**Methods** 35 women with ventriculomegaly were identified on anomaly/fetal medicine scans between 20 to 30 weeks of gestation. They were investigated for aneuploidy, infections and further abnormalities. Long term neurological outcomes including the differences between mild (10–12 mm), moderate (13–15 mm) and severe ( $\geq 16$  mm) ventriculomegaly in unilateral/bilateral and stable/progressive cases were examined.

**Results** Ultrasound scanning data:

26 women were offered invasive testing for aneuploidy, it was contraindicated or not appropriate in 9 patients. 5 women accepted invasive testing, 12 declined and 9 are still considering. Karyotyping was normal in all 5 women. 31 women had a negative TORCH screen. 13 women had a fetal MRI scan.

Apgar scores were normal in all babies. 7 out of 18 babies with stable or progressive ventriculomegaly had abnormal cranial USS or MRI postnatally. All babies with mild ventriculomegaly at diagnosis have no developmental abnormalities currently. 2/7 babies with moderate ventriculomegaly and 1/2 babies with severe ventriculomegaly have delayed development.

Abstract PF.71 Table

No. of cases	Size (mm)	Bilateral	Unilateral	Subsequent scans showed		
				Progressive in size	Stable in size	Returned to normal size
17	10–12	9	8	4	6	7
7	13–15	5	2	2	4	1
2	$\geq 16$	2	0	2	0	0

(9 babies are undelivered)