Abstract PF.42 Table

	Down's present	Down's absent	Total
UAC	10	11	21
NFM	23	381	404
	33	392	425

Sensitivity of UAC = $10/33 = 30.3\%$
 Specificity of UAC = $381/392 = 97.2\%$
 PPV = $10/21 = 47.6\%$
 NPV = $381/404 = 94.3\%$

Conclusion We suggest that NFM has a negative association with Trisomy 21 with high NPV and may be helpful in counselling. Furthermore UAC seems to be only associated with Trisomy 21 and no other chromosomal abnormality in this population. We suggest further prospective study of this phenomenon. Abnormalities of cell adhesion molecules (encoded on C21) are well described in Down's (DSCAM – Down's Cell Adhesion Molecule) and this suggests a possible aetiology.

PF.43 LOW MATERNAL SERUM PAPP-A IN THE FIRST TRIMESTER AND PREGNANCY OUTCOME: AN EXPERIENCE OVER 3 YEARS

doi:10.1136/archdischild-2013-303966.053

A Weaver, S Nanda, C Rozette, P Kyle, S Sankaran. *Women's Health, St Thomas' Hospital, London, UK*

Introduction Maternal serum PAPP-A (pregnancy associated plasma protein-A) is a part of combined screening. Previous studies have shown correlation between low PAPP-A and adverse pregnancy outcome.

Objective The aim of this study is to establish the positive predictive value of low-PAPP-A in prediction of adverse pregnancy outcomes - pre-eclampsia (PET), pregnancy induced hypertension (PIH), delivery of small for gestational age neonates (SGA) and late pregnancy losses.

Materials and Methods 16690 women underwent combined screening from 1/8/2008 to 1/8/2011. 326 women with low PAPP-A (≤ 0.3 MoM) were identified (1.95%). The median PAPP-A of the screening population was 1.074 MoM. Within this group of pregnancy with low PAPP-A, maternal serum PAPP-A was compared between the subgroups of adverse pregnancy outcome and normal outcome.

Results

Abstract PF.43 Table

Cases	N	PAPP-A MoM (Median)	p	PPV %
Normal outcome	146	0.255	-	-
Adverse outcome	95	0.225	0.004*	39.4
PET	25	0.234	0.184	10.8
PIH	10	0.243	0.769	4.1
SGA	44	0.220	0.004*	21.4
Late pregnancy losses	15	0.191	0.024*	6.6

* Adjusted significance level $P < 0.0125$ - post hoc Bonferroni correction

Conclusion In our screening population, median PAPP-A MoM was higher compared to some previous studies. Maternal serum PAPP-A in pregnancies with adverse outcome was significantly lower than those that resulted in a normal outcome. Compared to the pregnancies with low-PAPP-A but normal outcome, median PAPP-A MoM was significantly lower in pregnancies ending in delivery of

small-for-gestational age neonate (customised BW $< 10^{\text{th}}$ -centile), and showed a trend towards a decrease in those ending in late-pregnancy losses (>24 weeks).

PF.44 WITHDRAWN BY AUTHOR

PF.45 COMPARISON OF ANTENATAL DETECTION RATES OF FETAL ANOMALIES BETWEEN EIGHT TRUSTS IN THE EAST MIDLANDS AND SOUTH YORKSHIRE. ARE THE FETAL ANOMALY SCREENING PROGRAMME TARGETS ACHIEVABLE?

doi:10.1136/archdischild-2013-303966.054

¹MW Osman, ²JLS Budd, ¹HA Mousa. ¹University Hospitals of Leicester, Leicester, UK; ²East Midlands & South Yorkshire Congenital Anomaly Register, Dept. Health Sciences, University of Leicester, Leicester, UK

Background In 2010, the UK Fetal Anomaly Screening Programme (FASP) introduced targets varying between 50% and 98% for the antenatal detection of eleven congenital anomalies*. Auditing these standards is complex, requiring an understanding of trust size, case mix, the rarity of anomalies, screening uptake and the local obstetric population.

Aim To compare antenatal detection rates achieved by eight trusts within the region covered by the East Midlands and South Yorkshire Congenital Anomaly Register (EMSYCAR) between 2010 and 2011.

Methods Data were obtained for 651 cases, identified by relevant ICD-10 codes, delivered between 1/1/10 and 31/12/11. Bilateral renal agenesis and 'lethal skeletal dysplasias' were excluded, as the number of reported cases was too small to be reliable. The EURO-CAT* definition of thirteen 'serious' cardiac conditions was adopted. For those cases detected antenatally, gestational age at diagnosis was recorded, and the booking hospital anonymised. Eight trusts of varying size were analysed.

Results Although the vast majority of FASP cases were identified before delivery, only the anencephaly target was met by all eight, while Spina Bifida and Trisomy 18 targets were missed by five. One trust reached only four of nine targets, missing three of the others by a single case. However, **none of the FASP targets was achieved by 20 + 6 weeks.**

Conclusions Most trusts met expected antenatal detection rates specified by FASP, but not by $<20 + 6$ weeks. Considerable variability exists both between trusts and anomalies. Data produced here should enable the precise training needs of each trust to be identified more accurately.

PF.46 CHILDHOOD HOSPITAL ADMISSIONS OF CHILDREN CONCEIVED FOLLOWING ASSISTED REPRODUCTIVE TECHNOLOGY

doi:10.1136/archdischild-2013-303966.055

MH McComiskey, C Patterson, M Stevenson, IE Cooke. *Queen's University Belfast, Belfast, UK*

The purpose of this project was to compare paediatric hospital admission rates of children conceived via assisted reproductive technology with that of the population as a whole.

Consent-based ART register and admission records were linked and comparisons made between admission rates in the general population and the ART cohort by calculation of standardised admission ratios (SAR's). The project was performed in accordance with HFEA regulations and had ethical approval.

Children conceived via ART had a significantly lower rate of hospital admissions (all admissions and first hospital admissions) than

that of the population as a whole. Children born following ICSI had fewer total hospital admissions than their IVF peers, the difference did not persist when first admissions were analysed. Different-sex twins, but not twins overall, had lower total hospital admissions than singletons.

Abstract PF.46 Table

ART cohort	All hospital admissions		First hospital admission	
	O (E)	SAR# (95% CI)	O (E)	SAR# (95% CI)
All ART children	1378 (1795.3)	77 (73, 81)	634 (855.3)	74 (68, 80)
Type of ART	928 (1141.7)	81 (76, 87)	413 (542.0)	76 (69, 84)
-IVF treatment	450 (653.6)	69 (62, 75)*	221 (313.3)	71 (61, 80)
-ICSI treatment				
Type of embryo transfer	1153 (1458.5)	79 (74, 84)	512 (697.6)	73 (67, 80)
-Fresh embryo transfer	225 (336.8)	67 (58, 76)*	122 (157.7)	77 (64, 91)
-Frozen embryo transfer				
Plurality	888 (1172.7)	76 (71, 81)	425 (558.1)	76 (69, 83)
-Singleton	189 (293.4)	64 (55, 74)*	113 (139.6)	81 (66, 96)
-Different-sex twins	472 (599.3)	79 (72, 86)	200 (286.6)	70 (60, 79)
-Twins				
Gender	753 (1009.0)	75 (69, 80)	357 (463.4)	77 (69, 85)
-Male	625 (781.7)	80 (74, 86)	277 (390.3)	71 (63, 79)
-Female				

*denotes statistically significantly different to the value directly above

Standardized for age-group, gender and calendar period

PF.47 ROUTINE CERVICAL ASSESSMENT AT ANOMALY SCAN MAY REDUCE NEONATAL MORBIDITY AND MORTALITY ASSOCIATED WITH PRETERM BIRTH

doi:10.1136/archdischild-2013-303966.056

DA Crosby, S Daly. Coombe Women and Infants University Hospital, Dublin, Ireland

A recent metaanalysis has suggested that measurement of the cervical length should be performed in conjunction with the anomaly scan (1). We decided to investigate if this recommendation is justifiable in a population where the risk of preterm birth is low.

Methods We reviewed 11 years of obstetric data from the Coombe Women and Infants University Hospital. Relative risks of adverse outcomes from the metanalysis were applied and we extrapolated the possible numbers of women requiring intervention.

Results Over the 11 years from 1999 to 2010, there were 94,646 singleton deliveries.

There were 881 births (0.93%) as a result of spontaneous labour from 19–34 weeks, of which 805 were livebirths. Applying the figures from the metaanalysis 1609 women who had a singleton pregnancy could be expected to have a cervical measurement <15 mm. If none of these women received progesterone we could expect 515 women (32.1%) to deliver at <34 weeks. If we gave progesterone to all these women we would prevent 281 births at less than 34 weeks (17.5%). Therefore we would reduce the delivery rate before 34 weeks by 234 pregnancies, which is 21 babies a year.

Conclusion In units where the spontaneous preterm rate is low it is difficult to suggest that routine cervical measurement is justified. Each individual hospital should evaluate the possible benefits of universal screening for a short cervix prior to instigating a policy of performing a transvaginal ultrasound assessment of cervical length at the time of the anomaly scan.

REFERENCE

1. Romero *et al.* Vaginal progesterone in women with an asymptomatic sonographic short cervix in the midtrimester decreases preterm delivery and neonatal morbidity: a systematic review and metaanalysis of individual patient data. *American Journal of Obstetrics & Gynecology* 2012;206:e1-124.

PF.48 PRENATAL DIAGNOSIS OF MODERATE AND SEVERE CEREBRAL VENTRICULOMEGALY – OUR EXPERIENCE AN A SINGLE TERTIARY REFERRAL CENTRE

doi:10.1136/archdischild-2013-303966.057

C Monteith, K Flood, S Jaleel, B Hayes, C Barry, M Geary, FD Malone. Rotunda Hospital, Dublin, Ireland

The diagnosis of fetuses with cerebral ventriculomegaly >1.2 mm prenatally is challenging due the number of possible etiologies and variable prognoses. Recommended investigations include ultrasonographic assessment, TORCH screening, MRI evaluation along with specialised paediatric postnatal follow-up. There is limited data about the antenatal course and obstetric outcomes of affected pregnancies managed expectantly. We sought to evaluate all cases of prenatally diagnosed moderate to severe ventriculomegaly managed in our centre. We performed a retrospective cohort study of patients attending/referred to the Rotunda FAU from 2006–2011. Cases were identified from the FAU database and included for evaluation if ultrasonographic measurements >1.2 mm in either/both cerebral ventricles were documented. During this six year period, there were 71 cases identified that met study criteria with pregnancy outcome data available for 65 cases. Of these 83.1% (54/65) elected to continue the pregnancy following diagnosis with 44/54 continuing their care in the Rotunda Hospital. The mean gestation at time of ultrasonographic diagnosis was 24 + 3 weeks (14 + 4 – 39 + 4). Other prenatal investigations performed included 23 amniocenteses, 17 TORCH screens and 12 fetal MRIs. Vaginal delivery was achieved in 33.3% of women (n = 13) (mean HC 325.9 mm) with the remaining 66.7% (n = 26) undergoing caesarean section (mean HC 347.9 mm). The majority of cases with ventriculomegaly >12 mm were managed expectantly within our unit. We found that this finding had a significant impact on the mode of delivery. Overall less than 50% cases had a definitive aetiology prior to delivery which highlights importance of thorough paediatric follow-up postnatally.

PF.49 TERM ADMISSIONS TO THE NEONATAL UNIT; ARE THEY AVOIDABLE?

doi:10.1136/archdischild-2013-303966.058

A Ram Mohan, N Chawda, I Misra. Milton Keynes NHS Foundation Trust, Milton Keynes, UK

Introduction Approximately 10% of all babies born require admission to the neonatal unit and term infant represent a significant percentage of NICU admission and are major contributors to workload.

Aim To identify potentially avoidable admissions of term babies to neonatal unit and common avoidable factors.

Background Neonatal intensive care and special care nurseries provide a level of care that is both high in cost and low in volume. Term infant represent a significant percentage of NICU admission and are major contributors to workload.

Methods Retrospective audit from 01/01/2011 to 31/12/2011, patient list obtained from SCBU data base.

Results Total number of deliveries was 3882. Total admissions to SCBU were 316. Term baby admissions (>37 wks) were 117 (37%). 55% of babies stayed 3 to 5 days in SCBU. 19% babies required respiratory support. Readmission needed in 4 cases. External transfer was done in 8% (9) cases for reasons like cooling, surgical opinion and severe jaundice. No perinatal mortality was noted in these series.

Maternal profile 70% of the mothers were without any obstetric or medical risk factors. 50% mothers came in spontaneous labour. 50% of these mothers were delivered by vaginal delivery.