In the UK and Ireland, second-trimester miscarriage is defined as pregnancy loss after the 14th and before the 24th week of gestation[1]. Infection, cervical insufficiency, uterine malformations, gene polymorphisms, fetal/placental anomalies and genetic/acquired thrombophilias are known risk factors[1]; however the literature on this topic is limited. Thus, this study aimed to examine risk factors for second-trimester miscarriage.

A nested case-control study was performed using data from the multicentre, prospective Screening for Pregnancy Endpoints (SCOPE) study. Within the SCOPE cohort of 3,531 healthy, nulliparous women with singleton pregnancies, we identified cases of second-trimester miscarriage. For each case, 5 controls were selected from the SCOPE cohort; controls were matched according to centre of recruitment and age. Descriptive statistics were performed and unadjusted odds ratios were derived to assess risk factors.

8 women experienced a second-trimester miscarriage (2.3 per 1000 pregnancies); mean age was 28.6 years (SD: 6.8). On average, miscarriage occurred at 20^{+5} (SD: 20 days). An increased, though insignificant, risk was observed amongst women whose mothers had a preterm birth (OR: 4.11; 95% CI 0.56 – 29.96), maternal alcohol consumption in the first trimester (OR: 2.55, 95% CI 0.47 – 10.76) or vaginal bleeding in the first trimester (OR: 2.4; 95% CI 0.47 – 12.22).

Covariates of interest did not confer a significantly increased risk of second-trimester miscarriage, though our analysis was limited by the low incidence of second-trimester miscarriage. The understanding of second-trimester miscarriage and associated risk factors would benefit from prospective case-control studies that involve higher numbers of women.

REFERENCE

1. Edlow AG, Srinivas SK, Elovitz MA. Second-trimester loss and subsequent pregnancy outcomes: What is the real risk? *Am J Obstet Gynecol* 2007;197: 581.e1–6.

PP.33 UNCOVERING THE COMPLEX RELATIONSHIPS BETWEEN MATERNAL AGE, ANTENATAL DETECTION RATES, AND PREGNANCY OUTCOME IN CASES OF DOWN SYNDROME

doi:10.1136/archdischild-2013-303966.313

[1]CF Jordan, [2]LE Berry, [2]JLS Budd, [1]HA Mousa, [2]ES Draper. *[1]Dept. Obstetrics & Gynaecology, University Hospitals of Leicester NHS Trust, Leicester, UK; [2]East Midlands & South Yorkshire Congenital Anomaly Register,Dept. Health Sciences, University of Leicester, Leicester, UK*

Background Screening for Down Syndrome (DS) must be offered to all pregnant women in the UK, irrespective of age, between 10^{+0} and 20^{+0} weeks gestation. Current targets require antenatal detection rates between 75% and 90% of screened women.

Aim To use data from the East Midlands & South Yorkshire Congenital Anomaly Register (EMSYCAR) to explore the complex and changing relationships between antenatal diagnosis of DS, increasing maternal age and changing attitudes to termination over fifteen years.

Methods 1805 cases of DS were identified in 922,216 births between 1998 and 2011, an overall prevalence of 19.57/10,000. Cases were analysed by maternal age and pregnancy outcome, with mean gestational age at diagnosis calculated for each age group by cohort year.

Results 1025 DS cases (56.8%) were diagnosed antenatally, with the mean gestational age at diagnosis decreasing from 32 weeks in 1998/2000 to 20 in 2009/11. However, 49.1% (C.I. 42.1, 56.0) of DS cases in mothers under 25 were diagnosed antenatally, compared with 62.5% (C.I. 59.4, 65.6) for mothers over 35. While termination rates fell over time, they also differed significantly between age groups. 67.0% (C.I. 57.0, 75.9) of mothers <25 terminated an affected pregnancy compared with 83.7% (C.I. 80.5, 86.5) of those aged >34. Termination rates over time fell more abruptly among the youngest mothers.

Conclusion Despite known variation in birth prevalence of DS with maternal age, more research is needed to determine the role of maternal age in choices concerning screening uptake, consequent antenatal detection and subsequent decisions affecting pregnancy outcome.

PP.34 IMPACT OF MATERNAL OBESITY ON PERINATAL OUTCOME IN IUGR – THE MULTICENTRE PROSPECTIVE PORTO TRIAL

doi:10.1136/archdischild-2013-303966.314

F Cody, J Unterscheider, S Daly, MP Geary, MM Kennelly, FM McAuliffe, K O'Donoghue, A Hunter, JJ Morrison, G Burke, P Dicker, EC Tully, FD Malone. *Perinatal Ireland Research Consortium, Dublin, Ireland*

Objective The objective of this analysis, as part of the multicentre prospective PORTO Trial, was to study the effect of increasing maternal BMI on perinatal outcome in IUGR pregnancies.

Study design The PORTO Trial recruited 1,118 consecutive ultrasound-dated singleton IUGR pregnancies, defined as EFW < 10th centile. Maternal BMI was recorded at booking and divided into 4 subcategories. Perinatal outcomes were documented for all study participants.

Results Of the 1,076 recruited patients with complete records, 693 (64%) were of normal weight (BMI < 25), 258 (24%) were overweight (BMI 25–30), 93 (9%) were obese class I (BMI 30–35) and 32 (3%) were obese class II (BMI 35–40). Obese patients have significantly lower prospect of vaginal delivery and their offspring are at increased risk of adverse outcome (Table 1).

Conclusion Maternal obesity has a significant adverse impact on pregnancy outcomes with increased risk of Caesarean delivery, coupled with an increased perinatal morbidity and NICU admission rate.

Abstract PP.34 Table 1 Outcome for BMI Categories

	Normal	Overweight	Obese Class I	Obese Class II	p-value*
Mean GA at delivery (weeks)	38.1	37.5	37.2	35.5	<0.0001
Birthweight (g)	2543	2473	2414	1989	0.0055
Mode of Delivery					
CS	131 (22%)	65 (31%)	26 (38%)	9 (47%)	0.0003
Instrumental	75 (13%)	20 (9%)	6 (9%)	9 (47%)	
NVD	377 (65%)	122 (59%)	36 (53%)	1 (5%)	
Composite Morbidity	22 (3%)	20 (8%)	8 (9%)	7 (22%)	<0.0001
Perinatal Mortality	5 (<1%)	2 (<1%)	2 (2%)	1 (3%)	0.3391
NICU Admission	173 (25%)	77 (30%)	36 (39%)	15 (37%)	0.0031

PP.35 A FEASIBILITY STUDY FOR A RANDOMISED CONTROLLED TRIAL OF MANAGEMENT OF REDUCED FETAL MOVEMENTS AFTER 36 WEEKS GESTATION

doi:10.1136/archdischild-2013-303966.315

[1]G Bernatavicius, [2]S Roberts, [1]A Garrod, [1,3]MK Whitworth, [1,3]ED Johnstone, [1,3]JC Gillham, [4]T Lavender, [1,3]AEP Heazell. *[1]Maternal and Fetal Health Research Centre, Institute of Human Development, University of Manchester, Manchester, UK; [2]Centre for Biostatistics, Institute of Population Health, University of Manchester, Manchester, UK; [3]St Mary's Hospital, Oxford Road, Manchester, UK; [4]School of Nursing, Midwifery and Social Work, University of Manchester, Manchester, UK*

Objective Poor perinatal outcome after reduced fetal movements (RFM) is related to smaller fetal size on ultrasound scan, oligohydramnios and lower human placental lactogen (hPL) in maternal serum. We performed a feasibility study for an RCT of RFM management based on these parameters.

Methods Women with RFM ≥36 weeks gestation were invited to participate in a RCT comparing standard management (ultrasound

scan if indicated, induction of labour (IOL) based on consultant decision) with intensive management (ultrasound scan, maternal serum hPL, IOL if either result was abnormal). Anxiety was assessed by state-trait anxiety index (STAI) before and after investigations for RFM. Rates of protocol compliance and IOL for RFM were calculated.

Results 137 women were approached, 120 (88%) participated. 2 women in the standard group did not complete the study. 20% of participants had a poor perinatal outcome. All women in the intensive group had ultrasound assessment of fetal size and liquor volume vs. 96.7% in the standard group. Although there was no difference in IOL rates overall, 50% of the intensive group had IOL for abnormal scan or low hPL after RFM vs. 25% of controls who had IOL for RFM ($p < 0.01$). STAI reduced for all women after investigations but this reduction was greater in the standard group ($p = 0.02$).

Conclusion Women are willing to participate in an RCT of management of RFM with a low rate of attrition. Investigations decrease maternal anxiety. Participants randomised to the intensive group were more likely to have IOL for RFM.

PP.36 THE IMPACT OF UNEXPLAINED RECURRENT MISCARRIAGE ON SUBSEQUENT PREGNANCY OUTCOMES

doi:10.1136/archdischild-2013-303966.316

[1]M Dempsey, [1]K Flood, [1]N Burke, [1]A Murray, [1]S Mullers, [1]B Cotter, [2]P Fletcher, [2]M Geary, [1]FD Malone. *[1]Royal College Of Surgeons in Ireland, Dublin, Ireland; [2]Rotunda Hospital, Dublin, Ireland*

Aim We sought to determine subsequent pregnancy outcomes in a cohort of women with a history of unexplained recurrent miscarriage (RM) as compared to healthy pregnancy controls.

Study design This was a prospective cohort study of women attending a dedicated RM clinic in the Rotunda Hospital in 2011. Inclusion criteria included women with a history of three consecutive first trimester losses that were unexplained in the past, no medical intervention and singleton pregnancies only. The inclusion criteria for the healthy controls included no history of stillbirth, intrauterine growth restriction, preeclampsia or preterm labour.

Results Of the 42 women with RM recruited to the study nine (23%) experienced further first trimester miscarriages, one molar and one ectopic pregnancy. The remaining RM cohort with ongoing pregnancies (n = 31) were compared to healthy controls (n = 31) matched for age and BMI. The only statistical difference between the two groups was the earlier mean gestational delivery of the RM group (38 + 2 vs 39 + 4 weeks, $p = 0.004$) attributed to earlier induction due to their past history. Otherwise there was no significant difference with respect to pregnancy complications, delivery and neonatal outcomes. All of RM patients achieved successful term deliveries with a 74% vaginal delivery rate and a mean birthweight of 3.23 kg.

Conclusion This study re-iterates the reassuring prognosis for women with a history of unexplained RM who undergo supportive care at a dedicated clinic. The majority delivered appropriately grown fetuses at term which was comparable to healthy controls.

PP.37 THE ANTENATAL DETECTION OF SERIOUS CARDIAC ANOMALIES – EVALUATING A DISPARATE GROUP AGAINST A TARGET

doi:10.1136/archdischild-2013-303966.317

LE Berry, JLS Budd, ES Draper. *East Midlands & South Yorkshire Congenital Anomaly Register, Dept. Health Sciences, University of Leicester, Leicester, UK*

Background In 2010, the NHS Fetal Anomaly Screening Program (FASP) issued national targets for the antenatal detection rates (ADR) of "serious cardiac anomaly" at the 18^{+0}–20^{+6} week Fetal Anomaly Scan. There is no standardised definition for reporting for this heterogeneous group of anomalies. Here we evaluate the EUROCAT "serious cardiac group" against the FASP target of 50% antenatal detection, using data for 2010–2011 from the East Midlands and South Yorkshire Congenital Anomaly Register (EMSYCAR).

Methods Births between 01/01/2010 and 31/12/2011 reported to EMSYCAR as affected by one or more of the relevant cardiac ICD-10 codes were included in this analysis; cases associated with chromosomal anomalies were excluded. Birth prevalence and detection rates with 95% confidence intervals were calculated for each anomaly and compared to the FASP target.

Results The regional birth prevalence rate for the serious cardiac group was calculated; this varied between anomaly sub-groups from 0.59 to 4.42 per 10,000 births. The ADR failed to reach the FASP target: (44.85%, *39.14%–50.66%*) though it was not significantly lower. Overall, 7 sub-groups reached the FASP target; 2 groups achieving statistical significance.

Conclusion The EUROCAT serious cardiac group of anomalies show wide ranging birth prevalence and ADR between the subgroups, highlighting problems with standardised reporting. Given problems defining the group and the requirement for producing annual FASP target data at hospital level using small case numbers, there is major statistical uncertainty, leading to problems interpreting results. Standardisation of definitions and reporting will enhance the value of FASP targets for units.

PP.38 AN AUDIT INTO THE OUTCOMES OF PREGNANCY IN PATIENTS WITH THROMBOPHILIA

doi:10.1136/archdischild-2013-303966.318

[1]C Harris, [2]P Eedarapalli. *[1]Queen Alexandra Hospital, Portsmouth, UK; [2]Royal Bournemouth and Hospital, Bournemouth, UK*

In pregnancy, patients with thrombophilia are known to have a poorer obstetric outcome. However the outcomes of pregnancy are not well defined in the literature. We did a retrospective audit looking at a cohort of women with thrombophilia. Medical records were reviewed for pregnancy events pre and post diagnosis of thrombophilia, the management and pregnancy outcomes.

Twenty-nine women had a total of 125 pregnancies, 83 pre-diagnosis and 42 with treatment. They had a mean age of 34 years with mean age at diagnosis of 29 years old. Women treated after a diagnosis of thrombophilia had significantly less miscarriages in the 1st trimester and 2nd trimester (68% vs 21%, Fisher's exact test $P = <0.0001$) than those pre-diagnosis and treatment.

The current treated pregnancy outcomes showed a mean birth weight of the babies born at term (37–40 weeks) was 3.2 kg (Range 2.43–3.95 kg). 38% had spontaneous onset of labour, whilst 55% were induced at 38–39 weeks gestation. The remaining 7% included a miscarriage and stillbirth. Only 63% achieved a vaginal delivery compared to 91.6% in the pre-diagnosis pregnancies, which was statistically significant. ($P = <0.02$ Fishers exact test). This is due to the higher number of inductions at 38–39 weeks gestation in these women.

Therefore the recommended treatment for thrombophilia in pregnancy has significant benefit to the outcome of live birth. However due to induction of labour prior to the due date to reduce the risk of stillbirth women are less likely to achieve a vaginal birth.

PP.39 TEENAGE PREGNANCY – A DECADE SINCE THE UK DEPARTMENT OF HEALTH TEENAGE PREGNANCY STRATEGY PLAN: A REVIEW IN A UNIVERSITY TEACHING HOSPITAL IN LONDON, UK

doi:10.1136/archdischild-2013-303966.319

C Burrell, S Wright, H O'Connor, S Shaw, A Cornell. *Barking, Havering and Redbridge University Teaching Hospital NHS Trust, Romford, UK*