

The patients in this study had a high vaginal delivery rate with low neonatal morbidity despite very low platelet counts in some mothers and babies.

**PM.35 CHANGING FROM 24-HOUR URINARY PROTEIN COLLECTIONS TO PROTEIN-CREATININE RATIOS: AN AUDIT OF ONE HOSPITAL'S EXPERIENCE OF TRYING TO REDUCE ADMISSION RATES FOR PRE-ECLAMPSIA**

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**Background** Traditionally, 24-hour urinary protein collection has been used to quantify proteinuria in pre-eclampsia. There has been a move in recent years towards a "spot test" protein creatinine ratio (PCR) instead. The study hospital changed to PCR in December 2011. The audit was carried out to check that the department was following local and NICE Hypertension in Pregnancy guidelines and to see if there was a reduction in antenatal admission rates.

**Methods** The retrospective audit was carried out over two months. Data was collected from two periods – October to November 2011 (before introduction of PCR) and January to March 2012 (after introduction of PCR). Cases were identified from biochemistry department records. Data was collected on appropriate ordering and processing of tests, admission rates and length of stay in hospital. The ordering and processing of tests were compared with 95% standards. Admission rates were compared using Fisher's exact test and an odds ratio calculated. Lengths of stay were compared using a one-tailed Mann Whitney U test.

**Results** Patients from the PCR group were significantly less likely to be admitted to hospital ( $p = 0.017$ , odds ratio 0.2) and if admitted, length of stay was significantly shorter ( $p = 0.027$ ).

**Conclusions** The significantly reduced admission rates and length of stay associated with the PCR group suggests that the diagnostic move from 24-hour urinary protein collection to PCR was beneficial to the department.

**PM.36 RESOURCE IMPLICATIONS OF CONVERTING FROM A WHO/ADA HYBRID TO IADPSG CRITERIA FOR DIAGNOSING GDM IN A UK UNIVERSITY HOSPITAL**

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**Background** In the UK, two studies have reported discordant findings in predicting the impact of International Association of the Diabetes and Pregnancy Study Group (IADPSG) criteria on the number of GDM cases (3% vs. 114% increase). This disparity warrants further evaluation. Our unit offers a 3 point GTT utilising the WHO thresholds for fasting and 2 hrs, the American Diabetes Association (ADA) threshold for 1 hr and like the IADPSG requires only one criterion for a positive diagnosis. Our unique access to this type of OGTT data makes us well placed to forecast the minimum impact on services.

**Aims** To ascertain the number of women diagnosed as GDM using WHO, WHO/ADA and IADPSG criteria. To determine the resource implications of IADPSG criteria.

**Methods** A retrospective study of 2905 OGTT results of women delivered in our unit between 1<sup>st</sup> January 2009 and 31<sup>st</sup> December 2011.

**Results** The numbers of women diagnosed with GDM were 327, 454 and 528 using WHO, WHO/ADA and IADPSG criteria respectively. This shows IADPSG criteria would lead to a 16.3% increase in our number of GDM cases equating to 25 extra cases/year. Had we been reliant on just WHO criteria, adopting IADPSG criteria would lead to a 61.4% increase, equating to 67 extra cases/year.

**Conclusions** UK units offering a 2 point WHO GTT should expect a > 60% increase in GDM numbers with IADPSG implementation. On the contrary, units already offering a 3 point WHO/ADA hybrid should anticipate a less drastic 16% increase.

**PM.37 EVALUATING THE SAFETY OF IVC PHILTRE USE DURING PREGNANCY: A CASE SERIES**

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Pregnancy has been found to be associated with a 4–5 fold increase in the risk of venous thromboembolism (VTE), due to various physiological changes[1] and VTE has been the leading cause of direct maternal mortality in the UK over the past decade[2]. Management of VTE using an inferior vena cava (IVC) philtre is recommended by the Royal College of Obstetricians and Gynaecologists in women in the perinatal period with iliac vein VTE to reduce the risk of PE, or with proven DVT and continuing PE despite adequate anticoagulation. However, little data currently exists on the safety of IVC philtres during pregnancy.

Data were collected from women who underwent IVC philtre insertion for a VTE during pregnancy (January 2000 – September 2012) in the interventional radiology department at Central Manchester University Hospitals, Manchester.

Nine patients were initially identified, of which six had complete delivery data available. 67% ( $n = 6$ ) of patients had an acute VTE late in the third trimester, requiring philtre insertion and 56% ( $n = 5$ ) also had a previous history of VTE. All patients delivered at term; one case was delivered by emergency caesarean section, and the remainder achieved vaginal deliveries. All infants were appropriately grown at birth and 83% ( $n = 5$ ) had 5 minute Apgar scores of 10. There was one case of philtre retrieval failure.

This case series is concordant with other similar series, and suggests no detrimental effects on pregnancy. However, more research is needed to evaluate the long-term safety profile of IVC philtre use in pregnancy.

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**PM.38 CONDITIONS TRIGGERING LOCAL INCIDENT REVIEWS IN UK HOSPITAL MATERNITY UNITS**

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**Background** In countries such as the UK where maternal deaths are rare, reviews of other severe complications can provide an additional perspective to help learn lessons to improve future care. The aim of this study was to identify the types of incidents which

triggered local reviews in UK maternity units in order to inform future guidance for confidential case reviews of severe maternal morbidities.

**Methods** All consultant-led maternity units in the UK were contacted up to three times and asked to supply a copy of the checklist of incidents which triggered a local review. The lists were tabulated and compared with incidents recommended for review by the Royal College of Obstetricians and Gynaecologists (RCOG).

**Results** Among the 211 consultant-led maternity units in the UK, 72% provided an incident review trigger list. The conditions covered were highly variable, although those recommended by the RCOG were most highly represented. Over 90% of units who responded included maternal and neonatal deaths, stillbirths, intensive care admissions, severe haemorrhage (>1500 ml) and shoulder dystocia. Between 80–90% of units also listed eclampsia, uterine rupture, medication error and other organisational incidents. Only 73% of units listed hysterectomy, 66% cardiac arrest and 62% maternal sepsis or a severe infection.

**Conclusions** Significant variation exists between units in the number and type of conditions reviewed. Importantly, less than two thirds of units specifically review cases of severe infective complications, despite current concerns about a rising rate of maternal death due to sepsis.

#### PM.39 POSTNATAL RISK ASSESSMENT OF VENOUS THROMBOEMBOLISM (VTE)

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VTE is the third leading cause of maternal death in the UK<sup>1</sup>. In our unit, risk of VTE is assessed using a scoresheet based on RCOG guidelines<sup>2</sup>, and low molecular weight heparin (LMWH) prescribed according to risk. A recent case of VTE associated with incorrect scoring prompted this audit into the system's use.

This was a prospective audit, over a 2 week period in October 2012. Spot cheques, carried out on the Postnatal ward, assessed how many women had a completed score sheet, the accuracy of their scores, and identified factors contributing to inaccuracies. When the score indicated a need for LMWH, prescriptions were evaluated.

60 sets of notes were reviewed: 24 women had vaginal deliveries (SVD), 24 delivered by Caesarean section (CS) and 10 had instrumental deliveries (ID).

Only 43 [72%] women had a completed scoresheet: 60% of IDs, 96% of CS, 50% of SVDs. Of these, 74% were scored correctly: 2 were given the wrong LMWH dose. Of the women with incorrect scores, 4 prescribing errors were identified. 2 women without completed scoresheets required LMWH. All 8 prescribing errors were corrected.

The audit showed three main types of scoring error: clinical subjectivity, administrative and human factor.

More work is required to encourage staff to consider VTE risk assessment a vital part of a woman's care. The scoresheet should be included in the delivery notes and become a compulsory part of patient handover. Its use will be reaudited.

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#### PM.40 LIFESTYLE INTERVENTION REDUCES THE NEED FOR INSULIN THERAPY AND MACROMIA IN GESTATIONAL DIABETES MELLITUS

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**Introduction** In 2011 “life style intervention” was introduced in addition to a low glycaemic diet and insulin (when required), for management of patients diagnosed with gestational diabetes (GDM) at the National Maternity Hospital.

**Methods** A prospective study of the potential benefit of lifestyle intervention versus standard management in the treatment of gestational diabetes mellitus.

Lifestyle management included group education on diet and exercise and a personal glucometer for home blood sugar monitoring, reinforced at least weekly contact with the diabetic team. Data on demographics, insulin use and macrosomia was collected.

**Results** In the period 2008–2010, 412 cases with GDM received standard management and from 2011 onwards, data was available on 353 cases of GDM following the introduction of life style intervention. Patient demographics were similar in both groups and there was no significant difference in mean age, BMI, gestational weight gain and ethnicity between the two groups. In the pre-intervention cohort, 40.7% (168/412) were treated with insulin, compared with 22% (78/353) post intervention ( $p < 0.001$ ). The incidence of macrosomia (birth weight >90% centile for gestational age) was 20% prior to 2011 (84/412) and 13.8% (49/353) following intervention ( $p < 0.04$ ) (Table 1).

**Conclusion** The results show that the intervention has almost halved the need for insulin treatment in patients with GDM without any compromise in fetal outcome. The results strongly suggest that a randomised trial of life style intervention should be conducted.

Abstract PM.40 Table 1

	Pre-intervention	Post-intervention	
Number	412	353	
Insulin treatment	168 (40.7%)	78 (22.9%)	$P < 0.001$
Macrosomia	84(20%)	49 (13.8%)	$P < 0.04$

#### PM.41 CAN PULSE WAVE ANALYSIS PREDICT ADVERSE OBSTETRIC OUTCOME IN PREGNANT WOMEN WITH CHRONIC HYPERTENSION?

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**Introduction** Complications of pregnancy including super imposed pre-eclampsia (PE), fetal growth restriction (FGR) and pre-term delivery are common in women with chronic hypertension. Outside of pregnancy measurement of arterial stiffness using pulse wave analysis is highly predictive of future cardiovascular events. We aimed to assess the utility of pulse wave analysis in pregnancy in a cohort of women with chronic hypertension.

**Methods** Using the Tensioclinic™ arteriograph, women with hypertension attending a specialist clinic had longitudinal haemodynamic measurements taken at three time points from early pregnancy. Measurements included peripheral BP, central BP and pulse wave velocity (PWV).

**Results** To date pregnancy outcome data are available in 24 women. In women with an adverse obstetric outcome (preterm