

Interferons are a group of naturally occurring macromolecules with antiviral, antiproliferative and immunomodulatory properties, and interferon beta is currently the most widely used therapy for multiple sclerosis. However, limited data in primates suggests that interferon beta may be abortifacient. Due to this and due to lack of experience with drug safety, it is usually suggested that either treatment is suspended when a pregnancy is planned, or a critical assessment of the pros and cons of ceasing therapy should be performed.

A literature review of the last ten years identified nine papers, which looked at maternal (relapse rates, mode of delivery) and fetal/neonatal outcomes (spontaneous abortion, pre-term delivery, birth weight, birth defects, still births and developmental milestones) associated with its use in pregnancy.

The literature review highlighted conflicting results, however, on the whole, for most outcomes most studies did not associate IFN beta use during pregnancy with adverse outcomes. Further trials investigating important maternal, fetal and neonatal outcomes are called for.

**PM.32 PLATELET FUNCTION IS SIGNIFICANTLY REDUCED IN THE FIRST TRIMESTER OF PREGNANCY COMPARED TO THE NON-PREGNANT STATE**

doi:10.1136/archdischild-2013-303966.114

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Abnormalities of platelet function have been implicated in a number of obstetric complications and anti platelet therapy is used to prevent certain conditions. Research of platelet function in pregnancy has yielded conflicting results. We sought to critically evaluate platelet reactivity in pregnancy using an assay which allowed several agonists of varying concentrations to be assessed concurrently and aimed to clarify platelet reactivity in normal pregnancy.

A prospective longitudinal study was performed throughout uncomplicated singleton pregnancies with patients recruited prior to 15 weeks' gestation. They were controlled for a number of factors known to affect platelet reactivity. Blood samples were obtained in each trimester (n = 36). Thirty non-pregnant healthy female volunteers also had a platelet assay performed. A modification of standard light transmission aggregometry was used to assess platelet reactivity, with light absorbance measured following addition of 5 different agonists at sub-maximal concentrations. Dose-response curves were plotted and the Ec50 was calculated for each agonist.

Platelet reactivity, as demonstrated by the Ec50, was significantly reduced in the 1<sup>st</sup> and 2<sup>nd</sup> trimester of pregnancy compared to the non pregnant state particularly with respect to collagen, (p = 0.002). Within the pregnancy cohort the platelet reactivity increased as the pregnancy progressed, most evident in response to arachidonic acid (AA) (p = 0.033).

This study demonstrates that platelet reactivity is altered in pregnancy, highlighted by the significant reduction in reactivity seen in the 1<sup>st</sup> trimester. This information will be critically important for designing and interpreting interventions to prevent obstetric complications, such as preeclampsia.

**PM.33 THE OBSTETRIC MANAGEMENT OF HAEMOPHILIA CARRIERS AND PATIENTS WITH VON WILLEBRAND'S DISEASE IN LEEDS**

doi:10.1136/archdischild-2013-303966.115

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**Background** Haemophilia and von Willebrand's disease (vWD) are inherited bleeding disorders that present significant obstetric challenges, including risks of neonatal intracranial haemorrhage and postpartum haemorrhage (PPH). The ideal mode of delivery can also be controversial.

**Aims** To assess the obstetric management of haemophilia carriers and vWD patients within the Leeds Teaching Hospitals Trust and to identify any maternal/neonatal complications.

**Method** 10 year retrospective audit of 24 women (10 haemophilia carriers; 14 vWD patients) identified from the Obstetric-Haematology Clinic between 2001 and 2011 in Leeds. Maternal and neonatal management was compared to the BJH guidelines.<sup>1,2</sup>

**Results** From the 10 haemophilia patients, 9 had antenatal gender identification (7 were male and 5 affected). There were 4 PPHs in the vWD group (not exceeding 800 mls). Amongst the haemophilia patients 9 had a normal delivery and 1 had an elective C-section. In the vWD group 11 had normal deliveries, 2 had elective C-sections and 1 had a rotational forceps. 1 fetal blood sample was performed in the haemophilia group and 2 fetal scalp electrodes were used in the vWD group (both contraindicated). There was no neonatal morbidity amongst the haemophilic patients but 4 babies in the vWD group sustained bruising/prolonged bleeding which were forceps and im vitamin K-related respectively.

**Conclusions** Vaginal delivery was the preferred mode of delivery and was not associated with any significant maternal or neonatal morbidity. Managing these patients through a multidisciplinary approach optimises their antenatal care and ensures that an intrapartum management plan is discussed and clearly documented.

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**PM.34 IMMUNE THROMBOCYTOPENIA IN PREGNANCY**

doi:10.1136/archdischild-2013-303966.116

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Immune thrombocytopenia (ITP) is the most common cause of thrombocytopenia in the first half of pregnancy and occurs in one or two per thousand pregnancies. The management of these pregnancies is often directed at maintaining a sufficient platelet count for delivery and other labour ward procedures. A retrospective review, of pregnancies complicated by ITP, was performed to determine mode of delivery and mean platelet counts during pregnancy.

Patients with ITP were identified from the maternal medicine database. Delivery demographics for these patients were obtained from the hospital's database. Platelet counts were obtained for each trimester of pregnancy for the mother and the neonate.

There were 39 pregnancies, complicated by ITP, identified from 2005–2012. 15 were nulliparous and 5 of the patients had two pregnancies during the study period. The majority had a vaginal delivery (76.9%). The mean platelet count in the first trimester was 119,200/μl (range 27,000–365,000/μl). In the second trimester, the mean platelet count fell to 99,400/μl (16,000–255,000/μl) and to 89,000/μl (22,000–231,000/μ) in the third trimester. There were 8 patients with platelet counts less than 50,000/μl in the third trimester. The mean neonatal platelet count on day one of life was 200,700/μl (42,000–414,000/μl) and 149,500/μl (15,000–279,000/μl) on day four of life. There were 5 neonates with platelets less than 50,000/μl.

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**

doi:10.1136/archdischild-2013-303966.117

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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**

doi:10.1136/archdischild-2013-303966.118

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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, 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**

doi:10.1136/archdischild-2013-303966.119

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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**

doi:10.1136/archdischild-2013-303966.120

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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