

placenta accreta. The average age was 35.6 years. All 6 had antenatal ultrasound and 5 had MRI.<sup>1</sup> 3 were diagnosed with placenta percreta and required bladder repair. 5 women had a caesarean hysterectomy. 4 women required ICU admission, 2 were admitted to HDU. 1 had conservative management with uterine artery embolization day 2 post operatively followed by manual removal of placenta at 8 weeks.<sup>2</sup> 2 women had a blood loss greater than 4 litres. All 6 women had female infants. All 6 had a history of previous caesarean section. 1 woman had 4 previous D&Cs for recurrent miscarriage. 3 had uterine artery embolization.<sup>3</sup>

**Conclusion** This review looks at the diagnosis and management of placenta accreta in a large tertiary centre and reviews the role of a multidisciplinary approach to its management.<sup>4</sup>

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## PL.53 A RETROSPECTIVE ANALYSIS ON COMPLICATIONS AND MANAGEMENT OF MACROSOMIC BABIES

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**Introduction** Considerable disparity has been noticed in macrosomic deliveries due to lack of recognised guideline in the management of macrosomia. In this study, we determined risk factors predicting macrosomia and associated complications. We analysed variations in management of macrosomia in a large teaching hospital.

**Method** This study was done by retrospective analysis of case notes of 45 women who delivered macrosomic babies from January 2010 to June 2010 in university hospitals of Leicester NHS trust.

**Results** Incidence of macrosomia was highest in the age group 30–40 years (46%). About 71% of babies with macrosomia in our analysis occurred in women with BMI < 30. Eighty % of macrosomic babies were born to non-diabetic mothers. Prior incidence of macrosomia occurred in 17.9% of multiparous women in our sample. Our analysis highlighted the variations in management of macrosomia, typically in mode of delivery (Table 1).

**Conclusion** In our analysis, we concluded that it is difficult to anticipate macrosomia based on risk factors. Also, there is a high incidence of complications associated with macrosomic deliveries. This highlights need for regular obstetric emergency 'skills and drills'. There is a need for standardised guidelines on management of macrosomia.

**Abstract PL.53 Table 1** Antenatal care/delivery/complications associated with macrosomia

Factor	Incidence
Antenatal clinical suspicion	40%
Macrosomia missed on scan	16.6%
Spontaneous Vaginal Deliveries	48.8%
Induction of Labour	33.3%
Elective Caesarean section	17.7%
Postpartum haemorrhage	44.4%
Anal Sphincter Injury	6.6%
Shoulder Dystocia	0.49%
Poor Apgar score/NNU admission	0%

## PL.54 THE FETAL PILLOW (FP): A NOVEL INTERVENTION TO REDUCE MATERNAL AND FETAL COMPLICATIONS IN CAESAREAN SECTIONS AT FULL DILATATION (CSFD)

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CSFD have an increase in maternal and fetal complications. There is an increase in post-partum haemorrhage, blood transfusions, and increase in hospital stay for mothers and NICU admissions. One method of reducing morbidity relating to CSFD is the FP, a silicone balloon inserted vaginally prior to CSFD resulting in a 3–4 cm upward displacement of the fetal head.

A retrospective study was performed analysing FP use in 16 patients undergoing CSFD, compared to 18 patients undergoing CSFD without FP use. The aim was to establish whether the FP reduces complications in CSFD.

Average operating time using FP was 41.6 minutes, and 70 minutes without. Average blood loss using FP was 698 mls, and 829 mls without. Uterine extensions were 31% in FP, and 33% without. The group without the use of FP saw 2 cases of blood transfusion, one had bladder damage intraoperatively, another required HDU admission, two had maternal pyrexia, and one required re-admission. This group also had two NICU admissions. 6% of surgeons reported fetal head delivery difficult using FP, and 39% without. 50% of surgeons said delivery of fetal head was easy using FP, and 39% without.

The FP seems to aid delivery of the impacted fetal head at CSFD. In the FP group there was reduction in average operating time, intra-operative trauma, need for transfusions, and blood loss. There was no maternal pyrexia, no maternal admissions to HDU, and no NICU admissions. These results are very encouraging to assess the routine use of fetal pillow in CSFD.

## PL.55 TESTING SALIVA FOR THE PREDICTION OF PRETERM BIRTH: HOW ACCEPTABLE IS THIS METHOD TO WOMEN AT RISK?

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**Background** Despite extensive work to prevent preterm birth (PTB) it is still not possible to accurately predict those women at risk. Previous research<sup>1</sup> has suggested that salivary progesterone may be useful as an indicator of risk. Saliva tests are relatively uninvasive, but the acceptability of this method has not yet been investigated in pregnant women.

**Aim** The POPPY study aims to investigate salivary progesterone in a large cohort of women (n = >1000) at risk of PTB to support the development a predictive test and to assess acceptability.

**Method** In addition to providing at least one 5 ml sample of saliva between 20 and 28 weeks' gestation, women at risk of PTB are asked to complete a short acceptability questionnaire (adapted from Sy *et al*<sup>2</sup>).

**Results** To date, 1042 questionnaires have been completed. Interim results reveal the number of women agreed or strongly agreed that: 1. They liked the test because it was: a) easy/simple to use, n = 816 (78%); b) better than having blood taken, n = 701 (67%); c) convenient, n = 672 (64%); d) quick, n = 600 (58%); 2. They disliked the test because of: a) mouth dryness, n = 300 (29%); b) time taken, n = 234 (22%); c) embarrassment, n = 89 (9%); d) feelings of gagging, n = 73 (7%). 3. 84% of respondents (n = 880) would recommend it to other pregnant women.

**Conclusion** Although the majority of women found providing saliva for testing acceptable, this was not universal. Consideration

must be given to privacy, and the time needed may be reduced if a smaller volume is required.

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**PL.56 THE CONSTRUCTION OF COMPUTATIONAL UTERINE MODELS FROM MRI DATASETS OF THE GRAVID UTERUS AND POST PARTUM UTERUS**

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**Introduction** Our study developed geometric structures of the full term gravid and post partum uterus from clinical MRI images to provide a computational model. These geometric models contribute to the *myometrial physiome concept*<sup>1</sup> and ultimately will quantitatively relate non invasive measures of uterine activity to the spatiotemporal activity of the myometrium during pregnancy. This will further develop our understanding of the physiology of labour.

**Methods** Uterine geometry was extracted from 94 clinical MRI images of the full term gravid uterus and 612 diffusion tensor MRI images of the post partum uterus removed by hysterectomy and treated with Syntocinon post delivery. We reconstructed the coordinates of each uterus within a computer visualisation package and produced a quantitative geometric reconstruction of the uterus in the pre and post partum state.

**Results** Three dimensional surface models of the *in vivo* full term gravid uterus and *ex vivo* post partum uterus were produced. Quantitative comparisons of the transverse, longitudinal and anteroposterior measurements of the uterine models with the uterine anatomy in the MRI images showed that the method of extraction was accurate and reliable. The results confirm that it is possible to produce a computational reconstruction of the geometric structure of the uterus from clinical MRI datasets which will be fully illustrated.

**Conclusion** Computational models provide an alternate research resource and have been integrated into patient assessment in Cardiology. The uterine equivalent must be further developed with the potential to increase our understanding of the physiological mechanisms in preterm and full term labour.

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**PL.57 AUDIT OF MIDWIVES' KNOWLEDGE OF NEURAXIAL ANALGESIA IN LABOUR**

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**Introduction** Antenatal classes at our trust are delivered by midwives. During labour they are gatekeepers to mothers accessing different modes of analgesia. Advice to mothers should be accurate, void of misconceptions or bias. We audited midwives on their knowledge of neuraxial analgesia in labour.

**Methods** The Obstetric Anaesthetists' Association publication on labour analgesia was the standard for this audit.<sup>1</sup> Midwives were audited prospectively on a one to one basis.

**Results** Twenty seven midwives were audited. Only six perceived epidurals as the most effective analgesia in labour. Further results are depicted in Table 1.

**Abstract PL.57 Table 1 Midwives' knowledge of side effects of epidurals compared to risk quoted in current guidance**

Side Effect	Number of midwives who knew this as a side effect (%)	Actual risk
Failure	20 (74%)	1 in 8
Long-term backache	5 (18.5%)	No increased risk
Increased risk of assisted delivery	26 (96.3%)	1 in 7
Temporary sensory loss	15 (55.5%)	1 in 1000
Increased risk of caesarean section	10 (37%)	No increased risk
Epidural abscess	9 (33.3%)	1 in 50 000
Adverse effects on baby	4 (14.8%)	No direct risk to baby

**Discussion** Neuraxial analgesia in labour is associated with favourable fetal acid base profiles.<sup>2,3</sup> This audit revealed a difference in knowledge amongst midwives compared with current evidence, potentially leading to mothers being misinformed on labour analgesia. A comprehensive education programme delivered by anaesthetists to midwives will address misconceptions and increase awareness on labour analgesia, ensuring mothers are provided with accurate evidence based information.

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**PL.58 INCREASING THE NUMBER OF DELIVERIES AT KABUBBU HEALTH CENTRE, RURAL UGANDA, THROUGH COMMUNITY HEALTH EDUCATION. AN OBSERVATIONAL STUDY**

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**Introduction** Uganda has a maternal mortality ratio of 440/100,000 live births. With 60 million of the world's annual 130 million deliveries occurring at home it is imperative that we encourage women to deliver in a health facility as a means to reduce maternal mortality and achieve the millennium development goals. Research undertaken in Nepal looking at the impact of community health groups, facilitated by local women, to reduce maternal mortality has shown encouraging results. Through a series of community health education sessions we aimed to increase the number of women delivering at Kabubbu Health Centre (HC).

**Methods** Over the period of 3 months 6 community health education sessions were undertaken in the village of Kabubbu, rural Uganda. Women were invited to attend discussion groups on family planning, safe motherhood and obstetric complications. We compared the number of women attending the antenatal clinic and delivering at Kabubbu HC before and after the intervention.