

**Method** Placental histopathology reports from women who gave birth in Leeds between 22–32 weeks gestation from 2009–2011 were obtained. Relevant maternal and neonatal data were accessed. Intergroup differences and trends were sought using Mann-Whitney *U* and logistic/linear regression analyses where appropriate.

**Results** 269 women were included in the study. 89% of the placentas demonstrated abnormal pathology (infection/inflammation and/or ischaemia/infarction). Smoking and socioeconomic deprivation were associated with an increased incidence of placental infection ( $p = 0.02$ ) and ischaemia ( $p = 0.0001$ ). Babies were born significantly earlier if their placenta demonstrated infection than those whose showed ischaemia ( $p = 0.0001$ ). Neonates born with infected placentas tended to be more likely to have intraventricular haemorrhage than those with ischaemic placentas (adjusted OR 1.9; 95<sup>th</sup> CI 0.5–6.5,  $p = 0.3$ ).

**Conclusion** Intrauterine infection/inflammation is the predominant antecedent of extreme prematurity, and is associated with maternal smoking and socioeconomic deprivation. Further studies need to consider the mechanisms which link these features. (supported by Cerebra)

**PP57 FETAL MICROCHIMERISM DOES NOT APPEAR TO BE IMPLICATED IN EPITHELIAL OVARIAN CANCER**

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**Objective** Ovarian cancer is the second most common gynaecologic cancer, and epithelial ovarian tumours are the most common malignant ovarian tumours. Pregnancy is an important factor in risk reduction and improved survival in epithelial ovarian cancers. Persistence of fetal cells after pregnancy, or fetal microchimerism, has been implicated in some female malignancies such as cervical and breast with different hypothesised roles. In this retrospective study, we aimed to determine if fetal microchimeric cells were involved in the progression of ovarian cancer.

**Study design** We investigated a well-characterised archive of epithelial ovarian tumour paraffin-embedded tissue sections from nulliparous and parous women. Fluorescence in situ hybridisation (FISH) was performed to detect male presumed-fetal cells. The outcome of blinded FISH analysis was correlated with reproductive history and clinic-pathological features of the cohort.

**Results** Fetal microchimeric cells were not detected in archived ovarian tumour formalin-fixed and paraffin-embedded tissue sections from parous women. Male-presumed fetal cells were instead found in sections from two nulliparous women, one of who had a previous miscarriage. Tumour cells were found to have multiple copies of X chromosomes by FISH analysis, and some tumour cells had loss of X chromosome relative to the ploidy level.

**Conclusion** These findings imply that fetal microchimerism does not have a significant role in the progression of ovarian cancer. Instead, fetal microchimerism could have a role in preventing the development of ovarian cancer by sensitising the maternal immune system to develop adaptive immunity against tumour cells that express onco-fetal antigens.

**PP58 OSTEOPATHIC MANIPULATIVE TREATMENT DURING LABOUR: AN EXPLORATORY STUDY**

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**Objective** Osteopathic manipulative treatment (OMT) is an alternative medical practise that focuses on body health by treating the musculoskeletal framework. Its aim is to affect positively the body's nervous, circulatory and lymphatic systems [1].

To date, the use of OMT during labour has been limited [2,3], although its effects are known during pregnancy [4,5].

**Aim** of this exploratory study is to investigate the effect of OMT in a group of women during labour.

**Methods** Of N = 119 women enrolled and in addition to ordinary care, N = 57 received OMT. Endpoints were differences in vaginal tears, Apgar scores and umbilical artery pH levels.

Statistical analysis was based on multivariate regressions, focusing on the independent effect of OMT on primary outcomes.

**Results** Baseline characteristics were balanced in both groups. OMT ( $\beta -0.589$ ; 95% CI  $-0.841$  to  $-0.337$ ;  $p < 0.0001$ ) and episiotomy ( $\beta -1.053$ ; 95% CI  $-1.334$  to  $-0.773$ ;  $p < 0.0001$ ) were significantly associated with a reduction in vaginal tears.

Only OMT was significantly associated to higher Apgar 1 min ( $\beta 0.572$ ; 95% CI 0.240 to 0.903;  $p < 0.001$ ) and 5 min scores ( $\beta 0.465$ ; 95% CI 0.240 to 0.689;  $p < 0.0001$ ).

Risks factors for umbilical pH levels  $< 7.35$  were OMT (OR 0.363; 95% CI 0.149 to 0.848;  $p = 0.02$ ) and women at second delivery (OR 0.346; 95% CI 0.129 to 0.918;  $p = 0.03$ ).

**Conclusions** OMT during delivery was found to affect positively vaginal tears, Apgar scores and umbilical pH levels.

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**PP59 DEVELOPMENT AND PILOT OF HAND HELD PRE-PREGNANCY DIABETES NOTES IN ENGLAND**

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**Background** The majority of expectant mothers with diabetes fail to achieve the recommended glycaemic control prior to pregnancy.<sup>1</sup> Suboptimal preparation for pregnancy is known to be associated with adverse outcomes.<sup>2</sup> Our aim was to develop handheld notes to standardise and enhance pre-pregnancy care for women with pre-existing diabetes.

**Methods** A multi-professional group designed the record along national recommendations<sup>3</sup> to encourage early engagement and enhance communication between primary and secondary care. The 6 month pilot of 160 notes was conducted in 13 hospitals and 5 primary care centres.

**Results** The notes are an 8 page document<sup>4</sup> and include a traffic light system to alert women of the preparations needed before starting a pregnancy. They contain prompts and checklists for clinicians to cover the essential information and management plans. Participants included women with type 1 and type 2 diabetes. The majority of respondents were new to preconception services. All participants thought that the notes were very useful in highlighting preparation and control prior to pregnancy. Two thirds felt the