**Pregnancy outcomes in women with low PAPP-A levels**

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**Objective**
To assess pregnancy outcomes for a pregnancy associated plasma protein A (PAPP-A) level of less than or equal to 0.415 MoM. As per current local guidance, we provide all women with a low PAPP-A with antenatal aspirin until delivery and two additional antenatal scans at 32 and 36 weeks. We present the data to show the outcome of women with a low PAPP-A before the introduction of aspirin and additional antenatal scans.

**Methods**
A retrospective case note review assessing pregnancy outcome in 300 women with a PAPP-A of less than or equal to 0.415MoM. These women were not given aspirin nor offered additional antenatal scans for low PAPP-A during the time period January 2011 to October 2013 as this was not clinical practice at the time.

**Results**
There was a lower rate of LSCS (18%) in low PAPP-A group compared to local (20.6%) and national (26.2%) data. The rate of normal vaginal delivery was higher in the lowest PAPP-A group 0.11-0.20 than for LSCS or instrumental delivery. The overall rate of vaginal delivery was higher in the women with low PAPP-A (68%) compared to local (67.1%) and national (60.9%) data. There were 9 TOPs during this time period between 18+0 and 22+1 weeks. Indications included trisomy 13, 18, 21 and fetal cardiac anomaly. There were more TOPs in the lower PAPP-A group (3 in 0.11-0.20) compared to 0 in >0.41 group. Out of 300 pregnancies 55 women had maternal complications (18.3%), including pre-eclampsia (40%) gestational diabetes (34%) poly/oligohydramnios (9%) and obstetric cholestasis (4.5%). The incidence of these complications was higher in the lower PAPP-A group (0.31-0.40). 49 (16.8%) out of 291 live births were found to be SGA, defined as BW<2500g at >37 weeks. The national rate of SGA is 7.4%. This confirms that a low PAPP-A is associated with SGA.

**Conclusion**
Lower levels of PAPP-A before introduction of aspirin are associated with an increased rate of SGA babies. The rate of vaginal delivery was higher than the national average. The rate of maternal complications was higher with a lower PAPP-A.