

## DR BOPP'S UPDATE NUMBER ONE

### *Measurement of cervical length for prediction of preterm birth*

There is controversy around the routine ultrasound assessment of the cervix as a means of defining risk of preterm delivery in low risk women.

There is also good data showing that therapeutic intervention (with progesterone) for 'high risk' pregnancies, defined on the basis of a short cervix, have a reduced prevalence of preterm birth.

- Accurately measured ultrasound cervical length has an inverse relationship with the risk of preterm birth.
- Other features of the cervix such as funnelling (effacement of the internal aspect of the cervix) and shortening in response to fundal pressure are known to be associated with preterm delivery – but do not add significant advantages to predictive modelling when compared to accurate measurement of cervical length alone.
- Charts describing normal cervical length from 16-36 weeks have been constructed. The median cervical length at 20 weeks is 42mm, the 1<sup>st</sup> centile is 23mm.
- In singleton pregnancies, having transvaginal assessment of cervical length performed as part of the routine anomaly scan at 20-24 weeks gestation, a short cervix has been shown to be associated with an increased risk of preterm birth. A cervical length of 23mm (the first centile) is associated with a 2.8 fold increase in risk of preterm delivery <34 weeks gestation. Cervical lengths of 15mm, 10mm and 5mm have likelihood ratios of 7.3, 13.3 and 24.3 for preterm delivery <34 weeks respectively.
- There is a growing body of evidence suggesting that interventions, such as progesterone and/ or cervical cerclage may be of benefit for women otherwise considered low risk of preterm birth found to have a short cervix in the midtrimester. Accordingly, it is becoming more common for cervical length assessment to be offered, and performed, at the time of the routine midtrimester ultrasound. Studies have used variable cut-off's to define a 'high risk' cohort that merits therapeutic intervention, but on current evidence using a cut-off of 20mm appears to be appropriate. Treatment with progesterone reduces the risk of preterm delivery <34 weeks by 42% and reduces neonatal morbidity. Approximately 11 women need to be treated to prevent one preterm delivery <34 weeks.