

Saliva test for early birth risk



22 July 2009

It is still unknown why about 40,000 UK women a year give birth prematurely

A simple saliva test could help spot which expectant women are likely to go into premature labour, experts believe.

Early identification would enable these mothers to be given steroids which help in the development of the baby's lungs, preventing disability and death.

UK researchers found women going into labour very early, before 34 weeks gestation, had abnormally low progesterone levels in their saliva.

Their study appears in the British Journal of Obstetrics and Gynaecology.

Each year in the UK more than 50,000 babies are born prematurely, before 37 weeks gestation, and the condition is still not well understood.

“ It would be wonderful if in the future we only had to ask a pregnant woman to produce a small sample of saliva to know whether or not she was at risk ”

Lead researcher Professor Lucilla Poston

Experts suspect that the hormone progesterone plays some part and studies are underway to test whether giving women more of this hormone during pregnancy cuts the risk of a preterm birth.

The latest work by researchers at University College London and King's College London, suggests monitoring progesterone levels in saliva could provide a cheap and convenient early marker for the condition.

When they studied 92 women deemed to be at increased risk of having a preterm birth, they found the women who delivered spontaneously before 34 weeks had much lower salivary levels of progesterone than those giving birth at term, after 37 weeks.

This measurable difference in progesterone was apparent at all gestational ages from 24 weeks onwards.

Simple check

It is not clear how the hormone influences the timing of labour, but experts do know progesterone has anti-inflammatory properties, suggesting low levels of the hormone in the maternal body might contribute to bacterial infection - a recognised cause of preterm birth.

Lead author Professor Lucilla Poston, from the Maternal and Foetal Research Unit at King's College London, said they were now planning a much larger study to validate these preliminary findings.

"Saliva is easy to collect, there is no need for a needle or a blood sample and it would be wonderful if in the future we only had to ask a pregnant woman to produce a small sample of saliva to know whether or not she was at risk of very early premature birth," she said.

Jane Brewin of Tommy's, the charity backing the research, said: "We are delighted with the results of this initial study. Backed by further research, we hope these findings will also have an impact on the development of preventative measures for preterm births."

Andy Cole of Bliss, the premature baby charity, said: "The development of a reliable test for premature birth is vital in ensuring our most vulnerable babies have the best possible outcomes."

Dr Yolande Harley from the charity Action Medical Research said: "We welcome any increase in our understanding of what causes premature birth that may ultimately help save babies' lives."