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Journal Scan

Immediate delivery compared with expectant management after preterm pre-labour rupture of the membranes close to term (PPROMT trial): a randomised controlled trial, Lancet, 387 January (10017)(2016)44445210.1016/S0140-6736(15)00724-2

Premature rupture of membranes (PROM) occurs in about one third of preterm births. American College of Obstetricians and Gynaecologist (ACOG) currently states that the management in patients with PROM before 32 weeks' gestation should be for expectant care until they have completed 33 weeks of gestation, provided there are no maternal or foetal contra-indications. While in women with PROM reached more than 34 weeks, labour should be induced immediately to reduce the risk of chorioamnionitis, perinatal infection, and in utero umbilical cord compression. These guidelines always have been debated as to why obstetrical colleagues would induce labour once a woman with ruptured membranes reached 34 weeks considering the risks associated with prematurity.

A recent remarkable study by Morris et al. was conducted with an aim to ascertain if immediate delivery of mothers with singleton pregnancies who presented close to term with leaking membranes had reduced neonatal infection rates without a rise in other morbidity. This PPROMT trial was a multicentric randomised controlled study conducted across 65 hospitals in 11 countries. It took 10 years to recruit over 1800 mothers who were above 16 years, between 34 weeks and less than 37 weeks of singleton pregnancies and presenting with ruptured membranes before the onset of labour without any evidence of infection. These women were randomised to immediate delivery (induction or caesarean) or expectant management, in which case the woman and her obstetrician waited for spontaneous labour or another indication to deliver. The primary outcome was occurrence of sepsis in these neonates. Secondary neonatal outcomes looked for were multiple neonatal morbidity and mortality indicators (i.e., fresh stillbirth, neonatal sepsis, mechanical ventilation ≥ 24 h, duration of mechanical ventilation or neonatal death) along with respiratory distress syndrome and duration of stay in

neonatal intensive care unit. Maternal outcomes were frequency of antepartum or intrapartum haemorrhage, intrapartum fever, duration of antibiotic treatment before and after delivery and type of delivery.

They recruited 924 to the immediate birth group and 915 to the expectant management group. They found that neonatal sepsis occurred in 23 (2%) of the babies in the immediate delivery group, 29 (3%) of the expectant group, a difference which could easily be due to chance ($p = 0.37$). There were 3 neonatal deaths in each group. On the other hand, expectantly managed pregnancies ended up with a significantly higher gestational age and birth weight, and not surprisingly less NICU admission, less respiratory distress ($p = 0.008$), less assisted ventilation ($p = 0.02$), and fewer days in hospital ($p < 0.0001$), all of which were highly statistically significant. But for the mothers there were some downsides, there was a slight increase in higher risks of antepartum or intrapartum haemorrhage, intrapartum fever, more use of postpartum antibiotics and longer hospital stay ($p < 0.0001$), but a lower risk of caesarean delivery, 19% in the expectant group compared to 26% immediate delivery group.

This is a very high quality study suggesting that we should not be doing what ACOG currently states, which is to deliver immediately because of the risk of neonatal sepsis. If things are going well, and there is no sign of infection or foetal compromise, a policy of expectant management should be followed in pregnant women who present with pre-labour rupture of membranes.

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