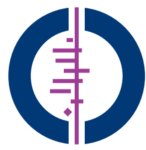

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WILEY

[Intervention Review]

Active versus expectant management for women in the third stage of labour

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ABSTRACT

Background

Active management of the third stage of labour involves giving a prophylactic uterotonic, early cord clamping and controlled cord traction to deliver the placenta. With expectant management, signs of placental separation are awaited and the placenta is delivered spontaneously. Active management was introduced to try to reduce haemorrhage, a major contributor to maternal mortality in low-income countries.

Objectives

To compare the effectiveness of active versus expectant management of the third stage of labour.

Search methods

We searched the Cochrane Pregnancy and Childbirth Group Trials Register (30 September 2014) and reference lists of retrieved studies.

Selection criteria

Randomised and quasi-randomised controlled trials comparing active versus expectant management of the third stage of labour.

Data collection and analysis

Two review authors independently assessed the studies for inclusion, assessed risk of bias and carried out data extraction.

Main results

We included seven studies (involving 8247 women), all undertaken in hospitals, six in high-income countries and one in a low-income country. Four studies compared active versus expectant management, and three compared active versus a mixture of managements. We used random-effects in the analyses because of clinical heterogeneity. There was an absence of high-quality evidence according to GRADE assessments for our primary outcomes. The evidence suggested that for women at mixed levels of risk of bleeding, active management showed a reduction in the average risk of maternal primary haemorrhage at time of birth (more than 1000 mL) (average risk ratio (RR) 0.34, 95% confidence interval (CI) 0.14 to 0.87, three studies, 4636 women, GRADE:*very low quality*) and of maternal haemoglobin (Hb) less than 9 g/dL following birth (average RR 0.50, 95% CI 0.30 to 0.83, two studies, 1572 women, GRADE:*low quality*). We also found no difference in the incidence in admission of infants to neonatal units (average RR 0.81, 95% CI 0.60 to 1.11, two studies, 3207 infants, GRADE:*low quality*) nor in the incidence of infant jaundice requiring treatment (0.96, 95% CI 0.55 to 1.68, two studies, 3142 infants, GRADE:*very low quality*).

There were no data on our other primary outcomes of very severe postpartum haemorrhage (PPH) at the time of birth (more than 2500 mL), maternal mortality, or neonatal polycythaemia needing treatment.

Active management also showed a significant decrease in primary blood loss greater than 500 mL, and mean maternal blood loss at birth, maternal blood transfusion and therapeutic uterotonics during the third stage or within the first 24 hours, or both, and significant increases in maternal diastolic blood pressure, vomiting after birth, after-pains, use of analgesia from birth up to discharge from the labour ward and more women returning to hospital with bleeding (outcome not pre-specified). There was also a decrease in the baby's birthweight with active management, reflecting the lower blood volume from interference with placental transfusion.

In the subgroup of women at low risk of excessive bleeding, there were similar findings, except there was no significant difference identified between groups for severe haemorrhage or maternal Hb less than 9 g/dL (at 24 to 72 hours).

Hypertension and interference with placental transfusion might be avoided by using modifications to the active management package, e.g. omitting ergot and deferring cord clamping, but we have no direct evidence of this here.

Authors' conclusions

Although there is a lack of high-quality evidence, active management of the third stage reduced the risk of haemorrhage greater than 1000 mL at the time of birth in a population of women at mixed risk of excessive bleeding, but adverse effects were identified. Women should be given information on the benefits and harms of both methods to support informed choice. Given the concerns about early cord clamping and the potential adverse effects of some uterotonics, it is critical now to look at the individual components of third-stage management. Data are also required from low-income countries.

PLAIN LANGUAGE SUMMARY

Delivering the placenta with active, expectant or mixed management in the third stage of labour

Background

Once a baby is born, the womb (uterus) continues to contract, causing the placenta to separate from the wall of the uterus. The mother then delivers the placenta, or 'after-birth'. This is called expectant management of the third stage of labour. Active management of the third stage involves three components: 1) giving a drug (a uterotonic) to contract the uterus; 2) clamping the cord early (usually before, alongside, or immediately after giving the uterotonic), and this is before cord pulsation stops; 3) traction is applied to the cord with counter-pressure on the uterus to deliver the placenta (controlled cord traction). Specific ways the three components are used often vary. Mixed management uses some, but not all, of the three components. Active management was introduced to try to reduce severe blood loss at birth (haemorrhage). This is a major cause of women dying in low-income countries where women are more likely to be poorly nourished, anaemic and have infectious diseases. In high-income countries, severe bleeding occurs much less often, yet active management has become standard practice in many countries.

Our review question

In this review, we looked at different ways of managing the third stage of labour, and asked what are the benefits and harms for all women and, specifically, for women at low risk of severe bleeding? We found seven studies involving 8247 women as of May 2014. All were in hospital settings, six in high-income countries and one in a low-income country. Four studies compared active with expectant management and three compared active with mixed management.

What the studies showed

Overall, the quality of the evidence was generally low and more data are needed to be confident in the findings. For all women, irrespective of their risk of severe bleeding, active management reduced severe bleeding and anaemia. However, it also reduced the baby's birthweight and increased the mother's blood pressure, after-pains, vomiting and the number of women returning to hospital with bleeding. For women at low risk of bleeding, findings were similar though there was no difference in risk of severe bleeding.

Overall

Women should be given information antenatally to help them make informed choices. Some adverse effects experienced by mothers may possibly be avoided by using specific drugs. Delaying cord clamping may benefit the baby by preventing the reduction in birth weight from early cord clamping, but more research is needed. Also, it may be that just giving a uterotonic might reduce severe bleeding, without using the other parts of active management. More research is particularly needed in low-income countries.

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