

Controlled cord traction

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Gill Gyte asks, is it needed to deliver the placenta?

Controlled cord traction (CCT) is traction applied to the umbilical cord once the woman's uterus has contracted after the birth of her baby, and her placenta is felt to have separated from the uterine wall, whilst counter-pressure is applied to her uterus beneath her pubic bone until her placenta delivers. This is part of the active management of third stage of labour (AMTSL) which is currently recommended by NICE.^{[1](#)} Some women can find CCT unpleasant and some wish to avoid it.

Active management of third stage of labour was originally described as a combination of three interventions: 1) a routine drug to contract the uterus (uterotonic drug, previously syntometrine, now usually syntocinon, in the UK) given just before, with or just after the birth of the baby, 2) early cord clamping and cutting, and 3) controlled cord traction (CCT)^{[2](#)} but this can cover many variations in practice.^{[3](#)} Active management has been shown to reduce the risk of severe blood loss (postpartum haemorrhage or PPH) following the birth of a baby in a population of women at mixed risk of PPH compared with expectant management of third stage of labour (EMTSL)^{[3](#)}

Expectant management is where the placenta births naturally, so there is no routine uterotonic drug, the cord is clamped and cut after the placenta is born or when cord pulsation ceases, and the placenta birthed spontaneously or with maternal effort.^{[3](#)} A number of recent guidelines use differing definitions of active management, and recommend deferred cord clamping although they differ in how long to wait^{[1](#)}, ^{[4](#)}^{[5](#)} So it is important for women to check exactly what care is given in their localities when active or expectant management are used.

Research has looked at the individual components of active management to see what part each might play in reducing PPH. A Cochrane review shows that the routine uterotonics play an important part in reducing PPH.^{[6](#)} However, for mothers of babies born at term, early cord clamping did not reduce severe haemorrhage, blood loss, the need for blood transfusion or postnatal haemoglobin^{[7](#)}(studies on preterm births did not assess maternal outcomes).^{[8](#)}

Does CCT reduce PPH?

A Cochrane review was undertaken to evaluate the effects of CCT during the third stage of labour, either with or without conventional active management.^{[9](#)} The review includes only randomised controlled trials (RCTs) and the authors assessed each trial for quality using the Cochrane risk of bias tool^{[10](#)} Authors identified three RCTs, one very large trial conducted by WHO across eight countries (Argentina,

Egypt, India, Kenya, the Philippines, South Africa, Thailand, and Uganda) involving over 23,000 women¹¹ Another trial was conducted in several sites in France involving over 4000 women¹² and the third trial was a single centre trial in Uruguay involving nearly 200 women.¹³ Data from the very large WHO trial dominates the pooled data in the Cochrane review but smaller studies did show similar findings and trial quality is good.

All three trials administered a routine uterotonic, generally oxytocin given intramuscularly (IM) or intravenously (IV), although some centres in the WHO trial used oxytocin plus ergometrine. All three trials used some form of deferred cord clamping: in the WHO trial, cord clamping was between 1-3 minutes,¹¹ in the French trial it was within 2 minutes¹² and in the Uruguay trial once pulsation stopped or after 3 minutes.¹³ The WHO trial, and thus the Cochrane review, include both term and preterm births.

What the review found

The review found no difference in severe PPH (blood loss over 1000 ml) when CCT was used compared with no CCT, nor were there any differences identified in the use of additional uterotonics, blood transfusion, maternal death/severe morbidity, operative procedures or maternal satisfaction. Manual removal of the placenta (MRP) was reduced with CCT, although this outcome was only assessed in the WHO and French trials.¹¹¹² In the WHO trial, the reduction in MRP with CCT disappeared (0.7% in both groups) when the centres routinely using oxytocin plus ergometrine were excluded from the analysis.¹¹ In the French trial,¹² which also showed a reduction in MRP with CCT (4% with CCT versus 6% with no CCT), the clinicians waited 30 minutes before performing MRP so it is not known whether there would have been a difference if clinicians had waited an hour. The review also found a small reduction in blood loss over 500 ml and length of third stage was shorter with CCT.

What does this mean for women in the UK?

The authors of the review concluded that the skills of providing CCT need to be maintained as there are circumstances where CCT would be required, but authors also said:

'Women who prefer a less interventional approach to management of the third stage of labour can be reassured that when a uterotonic agent is used, routine use of CCT can be omitted from the "active management" package without increased risk of severe PPH, but that the risk of manual removal of the placenta may be increased.'⁹ However, the recent UK NICE updated guidelines for intrapartum care¹ recommend CCT, so women wishing to avoid CCT should discuss this with their caregivers ahead of labour.

Since NICE no longer recommends syntometrine (oxytocin plus ergometrine) but now recommends 10iu oxytocin (syntocinon) by intramuscular injection routinely for third stage, MRP is unlikely to be affected if there is no CCT and time for birthing the placenta is not restricted to 30 minutes, (as the subgroup analysis in the Cochrane review indicates⁹ with data from the large WHO trial¹¹).

Finally

So for women wishing to have minimal intervention in the third stage of labour, this recent evidence is helpful. The evidence shows that the routine uterotonic component of active management is the key component in reducing PPH, and with the current NICE guidance to defer cord clamping¹ and the evidence of little benefit from CCT in the Cochrane review¹¹ women have good grounds on which to discuss their requests.

In addition, observational data from New Zealand showed an association between normal blood loss and expectant management of third stage in women following a physiological labour and in the care of skilled midwives,¹⁴ but further research is needed on this.

If women have particular wishes for care during the third stage of labour, then it is important to discuss these carefully with their midwife ahead of labour as misunderstandings around care during third stage can have severe consequences. It is helpful if the birth companion also understands the woman's wishes and the available evidence.

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Editor's Note: The AIMS publications Am I Allowed? and Birthing Your Placenta could be very useful to anyone planning this aspect of their care.