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Research Roundup

Reviewed by Nadine Edwards

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Third Stage Reviewed

Nadine Edwards summarises the Cochrane Review of active v expectant management

In 20102, Cecily Begley, Gill Gyte, Deirdre Murphy, Declan Devane, Susan McDonald and William McGuire updated the Cochrane Review on 'Active versus expectant management for women in the third stage of labour'. The full Review can be viewed at www.thecochranelibrary.com.

In the UK, most women routinely receive active management of the third stage of labour. This usually means that as the baby is being born, the midwife gives the woman an injection of the drug syntometrine (a combination of ergometrine and syntocinon), or syntocinon on its own. These drugs are called oxytocics and cause the woman's womb to contract. The midwife then immediately clamps and cuts the umbilical cord, and pulls the woman's end of the cord with one hand and applies counter-pressure against her womb (controlled cord traction) to get her placenta out quickly. Most researchers, doctors and midwives have recommended this for many years because overall, it was, and still is, believed to speed up the birth of the placenta and reduce heavy bleeding after birth.

The potential for heavy blood loss is a concern, even in a relatively healthy population. Thankfully, very few women in the UK die during childbearing, but very heavy bleeding after birth is still a cause of death1 Heavy blood loss can also affect a woman's health after birth when she has a new baby to care for, just when she needs to feel healthy and well. In low-income countries heavy bleeding after birth continues to be a major cause of death and illhealth among childbearing women for complex reasons that centre on pover ty and the unequal distribution of wealth and resources.

Over the last years there has been a growing body of research which has given us a more detailed understanding about the birth of the placenta and how a baby makes the transition from life inside its mother's womb, to the outside world.

Research has looked at managing the birth of the placenta with drugs, cord clamping and cutting, and controlled cord traction, compared with not giving oxytocic drugs, leaving the cord unclamped and uncut, and not pulling on it (expectant management of the third stage of labour).

The lastest Cochrane Review on third stage management by Cecily Begley and her colleagues2 sets out

to examine the research on active compared with expectant management of the third stage of labour, and how this impacts on the woman and on the baby's transition to life in the outside world. The Review authors have also considered the uncertainties around this issue and what we do not know about the third stage of labour.

The Review is based on five randomised controlled trials carried out in the UK, Ireland and Abu Dhabi between 1988 and 1998. While randomised controlled trials are often thought to be the best way of finding out about the impacts of treatments, they can only tell us how most people in a population will respond to the treatment, they cannot tell us about individuals. There are those who are critical about using the results of randomised controlled trials on their own because they cannot take into account complexities that could change the meaning of the results, and can miss important factors. The research carried out by Helen Stapleton and her colleagues[3,4] about the impact of the MIDIRS Informed Choices leaflets on women's decision making is a good example. The randomised controlled trial showed that giving the leaflets to women made little difference to the choices they made about maternity care. If this trial had not had a qualitative arm to it (where researchers talked to midwives and women, and watched how the leaflets were given out and used), it might have been assumed that it is a waste of resources to give women information! However, from the qualitative research, it became clear that the leaflets were often not always being given out, or that they were being given in a way that made it difficult for women to use the information in them, or that the women were discouraged from acting on the information they received in the leaflets if the information contradicted obstetricians' usual practices.

There were criticisms of the five randomised controlled trials on active and expectant management of the third stage of labour used in the Cochrane Review. Cecily Begley and her colleagues acknowledged and examined the potential flaws in these trials and the uncertainty of their findings in their Review. They also drew on other interesting research and suggested that even with all the research we have, we cannot be sure about many aspects of active or expectant third stage management.

The authors of the Review defined active management of labour as:

- routinely giving a drug to make the woman's womb contract (a uterotonic)
- clamping the cord quickly (i.e. before it stops pulsating)
- pulling on the cord (controlled cord traction) to deliver the woman's placenta.

They defined expectant management of the third stage of labour as:

- waiting for signs that the placenta has separated from the wall of the woman's womb
- letting the placenta be born without drugs or pulling on the cord – ie, 'spontaneously'.

The main findings of their Review are as follows:

When active management of the third stage of labour is used routinely for all women – whether or not they are likely to bleed heavily after birth:

- it reduced the average risk of heavy bleeding (over 1000mls) immediately after birth
- fewer women had a blood count of less than 9g/dl
- there were not more babies with lowered APGAR scores (below 7) five minutes after birth
- babies were lighter because they received less of their blood that is in the placenta during pregnancy and birth, due to the early cord clamping
- more women had increased blood pressure
- more women had after-pains
- more women used painkilling drugs (analgesia)
- after going home from hospital, more women returned with heavy bleeding (secondary bleeding)

For women who were at low risk of bleeding, the Review suggests that the results are the same, except that there is no difference in severe bleeding. This was of particular concern to the authors because it means that women at low risk of bleeding suffer the side effects of active management of the third stage of labour with no reduction in bleeding over 1000ml.

The Review concludes that while routinely applying active management for the birth of the placenta 'reduced the risk of haemorrhage greater than 1000ml in an unselected population', there are harmful effects. The authors state that women should be told about the benefits and harms so that they can make their own decisions. They also suggest that we need to know more about each component of active management of the third stage of labour because:

- early cord clamping reduces the amount of blood a baby receives at birth, which can lead to anaemia, and growth and developmental problems
- pulling on the cord might cause secondary bleeding
- some uterotonic drugs might have more harmful side effects than others.

The Review is very detailed, covers a great deal of ground and is definitely worth reading. The following issues are just a few of those that might be of particular interest. For example, the authors of the Review and other researchers have pointed out that all the randomised controlled studies considered in this Review and others took place in obstetric units, where midwives and doctors were much more used to using active rather than expectant management of the third stage of labour. This is important because, as the Review notes, in one of the trials[5] the rate of heavy bleeding in the women who had expectant management of the third stage of labour fell during the trial. In the pilot study it was 21%, during the first four months of the trial it was 12% and in the last six months it was 7% as the midwives became more skilled. This and other commentaries suggest that the skill of the practitioner is extremely important and that therefore all midwives need to be knowledgeable and skilled in helping women birth their placentas safely, physiologically. However, in a recent survey Diane Farrar and her colleagues[6] found that only 2% of UK obstetricians and 9% of UK midwives always or usually facilitated physiological placental birth.

Another interesting point is that heavy bleeding, or too much bleeding, is defined in nearly all third stage research as being a blood loss of 500ml or more. The World Health Organisation and others have

suggested that for a healthy woman, a blood loss of 1000ml might not be excessive. If 1000ml and over was considered to be a heavy blood loss (postpartum haemorrhage) rather than over 500ml, this would change the findings of the trials.

As we suggest in our new AIMS Third Stage booklet (see page 24).

'the standard definition of a postpartum haemorrhage was 500ml, which is the same volume of blood that is taken during blood donation, after which people are offered a cup of tea and a biscuit rather than being considered to have had a haemorrhage!' 7

One could argue (as we do in the new AIMS Third Stage booklet) that having an arbitrary figure for blood loss is unhelpful on its own, and that research needs to examine how well or unwell a woman is and feels. Blood loss might be unique to each woman and some women might lose a small amount of blood and feel unwell, while others might lose much more and feel well. The other associated and well-known problem, of course, is that blood loss after birth is very difficult to measure accurately.

The Review includes some interesting research from New Zealand and the Netherlands, where midwives are used to women giving birth to their placentas physiologically and where women do not bleed more than women who have actively managed third stages. In fact, in New Zealand, the records of nearly 34,000 women who had normal births were studied: nearly half had physiological third stages and had slightly less bleeding than the other women, who had actively managed third stages.

Some researchers8,9 have pointed out that expectant management of the third stage of labour described in the Review and other third stage research is not the same as a holistic midwifery approach which works with the physiology of the birth process including the birth of the placenta. They suggest that women need a calm, private, quiet, warm, supportive environment where they know and can fully trust all those around them to suppor t their decisions. This helps them feel safe, and they can then focus on the process of labour and birth. Their bodies will produce all the hormones they need to help the birth unfold straightforwardly, and when the baby is born, if the woman feels safe, secure and focused, her body will produce a surge of the hormone oxytocin, which helps her to birth her placenta without the use of drugs or interventions. For example, Kathleen Fahy and her colleagues10 compared active management of the third stage of labour in an obstetric unit with holistic care from skilled midwives in a birth centre. They found that the women in the birth centre who had holistic care had less blood loss than women who gave birth in the obstetric unit and had active management of the third stage of labour (see Edwards and Wickham7 and MIDIRS11 for more detailed information on this research).

The Review states that when the baby's cord is clamped and cut immediately after birth, the baby is lighter because it does not receive all the blood that is circulating in the placenta. It also acknowledges that this might be the cause of anaemia and affect growth and development in childhood and later life. Some of the researchers who have looked into this most closely are Peter Dunn in the UK, and Judith Mercer and her colleagues in North America.12 We now understand from this work that the blood in the

placenta is the baby's blood, that it takes at least a few minutes for it to flow from the placenta into the baby after birth and that the baby needs this blood to help it make the transition to life outside its mother's womb. While the cord is pulsating, as it does for several minutes after birth, the baby is also getting oxygen. Judith Mercer and her colleagues suggest that this is extremely important for compromised babies. A helpful chapter to read is by Judith Mercer and Debra Erikson-Owens12 about the baby's transition in its first hour of life. Finally the authors of the Review suggest various avenues for fur ther essential research and suggest that all fur ther research should consider 'maternal, fetal and infant outcomes.'

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