

Delayed clamping of the umbilical cord does no harm and reduces anaemia in newborns

Research question Is it safe to delay clamping the cord in newborn babies?

Answer Probably. A delay of up to three minutes does no serious harm and reduces the incidence of anaemia in newborns.

Why did the authors do the study? To inform an ongoing debate about the relative risks and benefits of waiting for a few minutes before clamping and cutting a baby's umbilical cord. Although the baby may benefit from an extra placental transfusion, observational work suggests there's a risk of respiratory distress, polycythaemia, and hyperbilirubinaemia.

What did they do? They designed a randomised trial to test the hypothesis that, compared with "immediate" clamping (within 15 seconds of birth), a delay in clamping of one or three minutes would increase a baby's packed cell volume by no more than 0.08, and that the delay would cause no serious harm to either mother or baby. In all, 276 Argentinian women took part. Allocation was concealed, and although the birth attendants knew which group their patients were in, the investigators collecting the data on outcomes did not. All analyses were intention to treat.

All participants were healthy women having a normal vaginal delivery or an uncomplicated caesarean section after an uneventful singleton pregnancy. The authors measured their babies' packed cell volume six hours after delivery then again after one or two days. They also measured serum concentrations of bilirubin and recorded any adverse outcomes for mothers or babies for one month.

What did they find? Six hours after birth, mean packed cell volumes were 0.54, 0.57, and 0.59 respectively in babies clamped immediately, at 1 min, and at 3 min respectively. The increases were not significant, and final values were within the normal range for all babies. Those in the immediate clamping group were significantly more likely to be anaemic (defined as a packed cell volume of less than 0.45) at six hours than babies in either of the delayed groups (immediate: 9% (8/90); 1 min: 1% (1/90); 3 min: 0/92). And they were still more likely to be anaemic one to two days later.

Babies whose cords were clamped at 3 min were more likely than the control babies to have polycythaemia (defined as a packed cell volume of more than 0.65) at six hours, (14% (13/92) *v* 4% (4/90); $P = 0.039$). But none had symptoms, and the difference disappeared within one or two days.

The timing of cord clamping had no measurable impact on the incidence of respiratory distress, serum concentration of bilirubin, need for intensive care, length of hospital stay, or infants' weight at 30 days. Maternal outcomes were similar in all groups.

What does it mean? Waiting for at least a minute before clamping the umbilical cord seems to reduce the risk of neonatal anaemia. The authors found no serious side effects in their study, although they don't discuss the power of the study to detect such effects. The benefits may last well beyond the one or two days studied here, and the authors plan a longer follow up to find out if delayed clamping has any longer term effects on iron balance in infants.

Ceriani Cernadas JM et al. The effect of timing of cord clamping on neonatal venous hematocrit values and clinical outcome at term: a randomized, controlled trial. *Pediatrics* 2006;117:779-86.

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Editor's choice

Looking for leaders

Leadership in medicine is a hidden theme in this week's *BMJ*—the need for it (p 1161), the lack of it (p 1111), how to develop it (<http://careerfocus.bmjournals.com/cgi/content/full/332/7550/194>), and even some examples of it (p 1157; p 1107).

Last week Dame Janet Smith bemoaned the lack of leadership in medicine in the UK (p 1111). Dame Janet led the inquiry into the profession's response to the murder by Harold Shipman of hundreds of his patients, and was referring specifically to lack of progress with implementing the recommendations in her report. She was dismissive of the GMC (whose president is interviewed in Career Focus this week) and criticised the "continuing silence" of the chief medical officer, Sir Liam Donaldson, whose report on revalidation, commissioned as a result of Dame Janet's report, is every day expected.

No one will envy Sir Liam his task. If anything requires leadership qualities, it is reaching actionable conclusions on an issue that continues to divide the profession, and doing so in an environment described last week by a former minister of health as a "maelstrom" of organisational, social, and scientific change and within an NHS that was "unstable, chaotic, and pressurised" (p 1111). Glyn Elwyn, responding to Dame Janet's pronouncement (p 1161), believes that even when the department of health declares its hand on revalidation, the profession will remain passive and complacent.

Dame Janet isn't the first and won't be the last to imply that there's a leadership vacuum in medicine. My predecessor, Richard Smith, wrote and spoke about the problem often. In 2003 he argued that the NHS suffers from having no single identifiable leader (*BMJ* 2003; 327:1421). The debate that followed is as relevant today as it was then. In his response, Chris Ham agreed on the need for clear and visible leadership at the top but said this had to be linked with the development of leadership at all levels, especially clinical leadership in both primary care and hospitals.

Lack of such clinical leadership is not just a UK problem. David Naylor chose this as the subject of his Lilly lecture two weeks ago (www.rcplondon.ac.uk). Naylor has written extensively on health services research and health policy and is president of the University of Toronto. The thesis of his lecture was that although doctors should in theory be natural leaders—bright, ambitious, articulate, and collegial—they are often poorly equipped to lead. Selection and training throughout medical careers favour individual achievements rather than consensus building. He argues that they are strong on cognitive intelligence and technical skills, rather than emotional intelligence. Doctors are good at solving problems on a case by case basis rather than at the systemic level. He says they tend to underestimate the value of other people's expertise and fall prey to assumptions about their own fallibility.

We will all know doctors who don't fit this description. But equally we will all know people who do. And who knows, Dame Janet may even be among them.

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