

EDITORIAL

Cord clamping and neurodevelopmental outcome in very low birth weight infants

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This month's manuscript on a follow-up study of very low birth weight infants treated with either immediate or a brief delay in cord clamping time is the first report of its kind.¹ In the recent decades, more than 10 studies have been published on a slight delay in clamping the umbilical cord in preterm infants, ranging from 30 to 120 s.² However, none of the recent studies has had neurodevelopmental follow-up as part of the study protocol. Immediate cord clamping has come into practice as part of an active management of the third stage of labor in a number of developed countries. Unfortunately, no randomized trials had been carried out at the time to study the effects the intervention of immediately clamping the cord might have on the infant. At the time of preterm birth, up to half to one-third of the circulating fetal blood volume is contained in the placenta rather than in the fetus. A slight delay of clamping the cord enables the shifting of whole blood into the infant. This stabilizes the infant's blood circulation, so that the need for circulatory support is reduced during the first 24 h of life with the positive effect of reducing the incidence of intraventricular hemorrhage and, furthermore, a reduction of donor blood transfusion in the first 6 weeks of life.²

With increasing survival rates to discharge of extremely low birth weight or very immature infants, the resulting on-costs need to be considered. Public spending will not stop at discharge, but will continue to cover the long-term consequences, such as neurological impairment.³ For the very immature group of infants, Mangham *et al* calculated an added cost for survival to 18 years of

age of approximately U\$99 996–153 345 (£61 781–£94 740, €67 960–104 214). The procedure of a slight delay in cord clamping time is one of the very few which can be provided in the health-care settings for free. If further follow-up studies show that it benefits the outcome for this vulnerable patient population, this will hopefully encourage more birth attendants to think about this option when delivering a preterm infant. The neurological development of preterm male infants is well known to be less favorable compared with female infants. The study of Mercer *et al.*¹ has provided an important step into the right direction. More studies on follow-up until at least school age will be required to confirm the findings.

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References

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- 3 Mangham LJ, Petrou S, Doyle LW, Draper ES, Marlow N. The cost of preterm birth throughout childhood in England and Wales. *Pediatrics* 2009; **123**: e312–e327.