Swedish researchers show link between delayed cord clamping and fine motor skills in children

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The importance of the umbilical cord not only for the fetus but for newborn infants too was shown by Swedish researchers several years ago, in a study that received great international acclaim. In a follow-up study in the journal *JAMA Pediatrics* they have now been able to show an association between delayed cord clamping (DCC) and children's fine motor skills at the age of four years, especially in boys.

Several years ago, in a clinical study comprising 400 newborns, Dr. Ola Andersson and colleagues demonstrated that the risk of iron deficiency at the age of four months was considerably lower in infants whose umbilical cords were clamped and cut three minutes after birth ('delayed cord clamping', DCC) than in those whose cords were removed within 10 seconds ('early cord clamping', ECC). The newborns in the study were well-nourished babies born after full-term pregnancies to healthy mothers.

'If the cord is left in place for three minutes, the blood continues to flow into the newborn's circulation. The baby receives about a deciliter of extra blood, which corresponds to two liters in an adult,' says Dr. Andersson, a researcher at Uppsala University and pediatrician in Halmstad.

In much of the world, cord clamping and cutting takes place immediately after birth and the baby is thus deprived of an important iron supplement from the umbilical blood. In poor countries, according to scientists, this iron deprivation due to the practice of stopping the placental transfusion before its completion may have a particularly serious impact on the child's development.

The *JAMA Pediatrics* article in question describes a four-year study following up a total of 263 (69 percent) of the babies from the first study. These children's development was investigated by means of IQ and cognitive tests, and also questionnaires for the parents.

The results reveal no difference in IQ or overall development between the children whose cords were cut early and those who underwent delayed cord clamping (DCC). On the other hand, both the tests and the questionnaire responses were able to show that the children in whom DCC had taken place had slightly better fine motor skills when they were four years old. The difference became clearer when the researchers looked at sex differences: it was in the boys, above all, that DCC exerted an impact on fine motor skills.

'Right from birth, girls generally have better iron stores, so boys have an elevated risk of iron deficiency. We hope our study will result in new recommendations around the world.'

Source:
Uppsala University
