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Journal Scan

Nestor E. Vain, Daniela S. Satragno, Adriana N. Gorenstein, Juan E. Gordillo, Juan P. Berazategui, M Guadalupe Alda, Luis M. Prudent, Effect of gravity on volume of placental transfusion: a multicentre, randomised, non-inferiority trial. *Lancet* (2014). [http://dx.doi.org/10.1016/S0140-6736\(14\)60197-5](http://dx.doi.org/10.1016/S0140-6736(14)60197-5).

Delayed cord clamping improves iron stores in the baby and reduces the risk of iron deficiency anemia in infants and its associated neurodevelopmental problems. For preterm infants also the practice improves baby's blood pressure, reduces the need for blood transfusions, reduces the rates of intracranial bleeding by 50%, and helps in the smooth transition between fetal and neonatal cardiovascular adaptation. Because the effects of delayed cord clamping for all infants is huge and were based on 40 yrs of accumulated evidence, therefore in 2012 WHO updated its report on basic resuscitation and recommended delayed cord clamping for 1–3 min after birth but with the infant preferably held below the level of the placenta. Many professional societies worldwide have also issued similar guidelines. However, these current recommendations have been slow to catch because it is cumbersome and uncomfortable for the doctor who has been advised that for effective placental transfusion to occur, the wet, slippery, screaming baby needs to be held below the level of the placenta (introitus position) or below so that gravity would help. A recent study published by Prof. Nestor E Vain et al has found that it is probably unnecessary to hold the babies below the placenta as babies who were placed on their mothers' stomachs before clamping fared just as well as those who were held lower. They tested whether the transfer of blood in delayed cord clamping procedures was affected by the position in which the baby was held immediately after birth. In the study, which was conducted in three university affiliated hospitals in Argentina, 197 babies were held in the introitus position while undergoing delayed cord clamping, as per usual practice, but 194 babies were instead immediately placed on the mother's abdomen (tummy) or chest. All of the newborns were still attached to umbilical cords, and weighed before and after the allotted time. By measuring the babies'

weights at the point of birth, and immediately after the delayed cord clamping procedure, the researchers were able to measure the volume of blood which had transferred from the placenta to the child. The group placed on their mothers' abdomens gained 53 g (SD 45, 95% CI 46–59) of blood, while the babies held lower gained 56 g (SD 47, 95% CI 50–63), supporting non-inferiority of the two approaches (difference 3 g, 95% CI – 5·8–12·8; $p = 0·45$). They did not note any serious adverse events during the study. Hence they found no statistically significant difference between the two groups in the volume of blood transferred, indicating that placing the baby on the mother's chest or abdomen is no less effective than the more awkward introitus position in delayed cord clamping procedures. Premature babies and newborns who needed resuscitation or were delivered via cesarean section were excluded from the study since authors felt further research was needed into blood flow in the umbilical cord in these infants.

Their study suggests that when umbilical cord clamping is delayed for 2 min, holding the baby on the mother's chest or abdomen is no worse than the earlier recommended practice of holding the baby below this level as results show that gravity did not have an effect on volume of placental transfusion. Because of the potential of enhanced bonding between mother and baby, increased success of breastfeeding and most importantly the compliance of the procedure among medical professionals, holding the infant by the mother immediately after birth should be strongly recommended.

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