

Maternal and Neonatal Outcome Analysis in Preterm Abdominal Delivery Underwent Umbilical Cord Milking Compared to Early Cord Clamping

Authors : Herlangga Pramaditya, Agus Sulistyono, Risa Etika, Budiono Budiono, Alvin Saputra

Abstract : Preterm birth and anemia of prematurity are the most common cause of morbidity and mortality in neonates, and anemia of the preterm neonates has become a major issue. The timing of umbilical cord clamping after a baby is born determines the amount of blood transferred from the placenta to fetus, Delayed Cord Clamping (DCC) has proven to prevent anemia in the neonates but it is constrained concern regarding the delayed in neonatal resuscitation. Umbilical Cord Milking (UCM) could be an alternative method for clamping the umbilical cord due to the active blood transfer from the placenta to the fetus. The aim of this study was to analyze the difference between maternal and neonatal outcome in preterm abdominal delivery who underwent UCM compared to ECC. This was an experimental study with randomized post-test only control design. Analyzed maternal and neonatal outcomes, significant P values ($P < 0.05$). Statistical comparison was carried out using Paired Samples t-test (α two tailed 0,05). The result was the mean of preoperative mother's hemoglobin in UCM group compared to ECC (10,9 + 0,9 g/dL vs 10,4 + 0,9 g/dL) and postoperative (11,1 + 1,1 g/dL vs 10,5 + 0,7 g/dL), the delta was (0,2 + 0,7 vs 0,1 + 0,6.). It showed no significant difference ($P=0,395$ vs 0,627). The mean of 3rd phase labor duration in UCM group vs ECC was (20,5 + 3,5 second vs 21,1 + 3,3 second), showed insignificant difference ($P=0,634$). The amount of bleeding after delivery in UCM group compared to ECC has the median of 190 cc (100-280cc) vs 210 cc (150-330 cc) showed insignificant difference ($P=0,083$) so the incidence of post-partum bleeding was not found. The mean of the neonates hemoglobin, hematocrit and erythrocytes of UCM group compared to ECC was (19,3 + 0,7 vs 15,9 + 0,8 g/dl), (57,1 + 3,6 % vs 47,2 + 2,8 %), and (5,4 + 0,4 g/dl vs 4,5 + 0,3 g/dl) showed significant difference ($P < 0,0001$). There was no baby in UCM group received blood transfusion and one baby in the control ECC group received blood transfusion was found. Umbilical Cord Milking has shown to increase the baby's blood component such as hemoglobin, hematocrit, and erythrocytes 6 hours after birth as well as lowering the incidence of blood transfusions. Maternal and neonatal morbidity were not found. Umbilical Cord Milking was the act of clamping the umbilical cord that was more beneficial to the baby and no adverse or negative effects on the mother.

Keywords : umbilical cord milking, early cord clamping, maternal and neonatal outcome, preterm, abdominal delivery

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