

Delayed cord clamping in term neonates, impact in a low-resource setting

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Introduction

- The optimal timing of umbilical cord clamping has been and still remains a highly controversial issue¹.
- There are no clear-cut guidelines on the clamping of umbilical cord after birth.
- Early cord clamping (ECC) puts the newborn at increased risk of hypovolemic damage, iron loss, and is a major cause of anaemia in infancy^{2,3}.
- Delayed cord clamping (DCC) is a low-risk intervention to reduce iron deficiency anaemia during infancy without increasing the risk of neonatal morbidity⁴.

Objectives

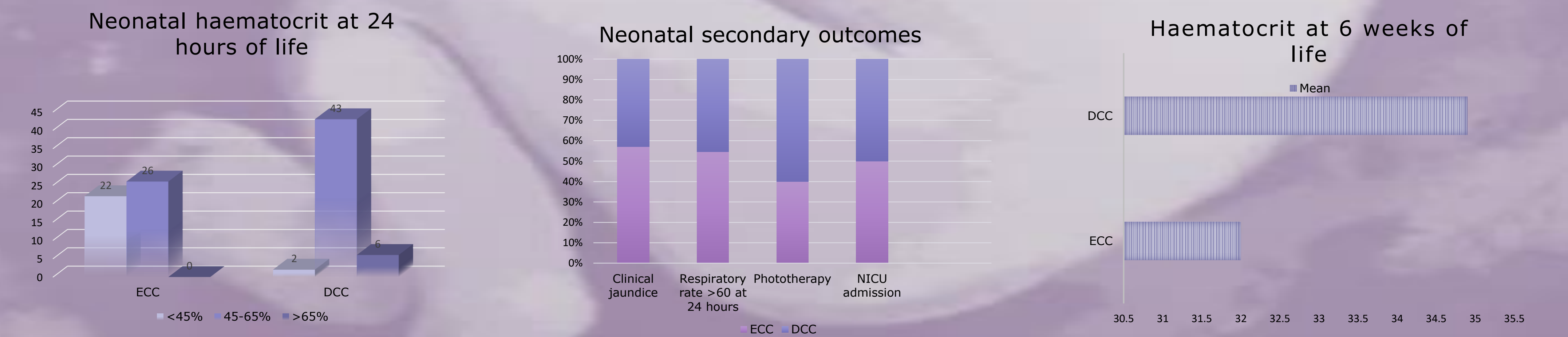
- To evaluate the effect of delayed cord clamping on haematocrit level at 24 hours of life.
- To determine the effect of delayed cord clamping on bilirubin level at 24 hours of life.
- To assess the effect of delayed cord clamping on neonatal morbidity (including polycythaemia, need for phototherapy, and respiratory symptoms).
- To evaluate the effect of delayed cord clamping on the infants haematocrit level at 6 weeks of life.

Methods

- A prospective randomised controlled study.
- A total of 110 mothers with uncomplicated singleton term pregnancy, admitted for vaginal delivery were assessed and randomised into two groups; early cord clamping group (within 10 seconds) and delayed cord clamping group (at 2 minutes) and followed up until 6 weeks postpartum.
- Randomisation was achieved by a computer-generated random number list; data collection was done using a semi structured pretested questionnaire and analysis was done using SPSS version 19.

Results

- Ninety-nine mother-infant pairs completed the study. Forty-eight in the ECC group, 51 in the DCC group.
- Venous haematocrit was significantly higher at 24 hours and at 6 weeks in babies that had delayed cord clamping (p=0.0001).
- Significantly lower prevalence of anaemia in the DCC group.
- No significant difference in neonatal morbidity between the two groups.



Discussion

- This study was done to determine the effect of a 2 minute delay in umbilical cord clamping of term neonates, and the risk of neonatal morbidity 24 hours after birth.
- We also evaluated the effect of delayed cord clamping on infant's haematocrit level at 6 weeks postpartum.
- There was a significant increase in the mean neonatal haematocrit value at 24 hours of life of babies who had delayed cord clamping. This was consistent with findings in other studies done in Europe⁵, North and South America, Asia and other African⁴ countries.
- There was no significant difference in neonatal adverse event rates between the two groups.

Conclusion

- Delayed cord clamping in term neonates for 2 minutes after delivery resulted in a higher mean haematocrit value of the newborn in the first 24 hours of life, an effect that persisted till 6 weeks postpartum.
- It resulted in a significant reduction in the proportion of anaemic neonates, and it did not increase the risk of neonatal morbidity.

Hold the scissors, please!

References

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