

Review of: "Delayed vs Early Umbilical Cord Clamping in 100 Preterm Infants: an RCT from Bhavnagar, Gujarat"

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Potential competing interests: No potential competing interests to declare.

General evaluation: *The study reports results of the application of DCC in preterm newborns from a developing country. It is interesting from the point of view of public health, since it confirms that it increases iron levels and decreases the need for blood transfusion in premature infants, without complications. It also includes evidence that DCC can be performed in premature infants born by cesarean section. However, it is necessary to provide information that gives precision and reliability to the results. Also, eliminate paragraphs or figures that do not add value. And, carry out a better contrast with the findings of studies previously published by other authors.*

SECTIONS

What this study adds

1) "For a preterm child between 28 to 37 weeks of gestation": *In the Methodology section, the age range is not defined (i.e. as inclusion criteria or in Table 1: Baseline characteristics). It is just mentioned <37 weeks of gestation.*

2) *The following findings have already been demonstrated in previous studies such as Mercer JS, Vohr BR, McGrath MM, Padbury JF, Wallach M, Oh W. Delayed cord clamping in very preterm infants reduces the incidence of IVH and LOS: an RCT. Pediatrics 2006; 117(4):1235-1242. doi.org/10.1542/peds.2005-1706. In addition, the latest systematic review such as Rabe H, Gyte GM, Díaz-Rossello JL, Duley L. Effect of timing of umbilical cord clamping strategies to influence placental transfusion at preterm birth on maternal results childish. Cochrane Database System Rev 2019; 9:CD003248, integrated these findings:*

- Hb at Birth, 1 and 4 months, and MCV at 4 months are significantly higher in DCC delayed (120 sec) cord clamping group.
- Infant morbidities like RDS, NEC, and IVH were not significantly different between DCC and ECC.
- Incidence of jaundice requiring phototherapy and symptomatic polycythemia was not increased significantly by DCC.

3) *Taking into account the aforementioned, I suggest that the authors state that the study confirms the efficacy of DCC in preterm infants from a health system of a developing country.*

Introduction

- 1) *Figures should be removed. The information that it is explained in these graphs should be summarized in the text and correctly referenced in the bibliography.*
- 2) *Reference number 2 is incorrect. Grajeda et al. includes term infants (>37 weeks of gestation). This reference corresponds to Mercer et al. (reference number 11).*
- 3) *Please, cite the author by his last name (Family name) and not his first name (3).*
- 4) *"Another benefit of DCC is that along with hemoglobin the Oxygen is also received by the baby and so asphyxia is prevented or minimized. This is seen as 'intact cord resuscitation' studies for asphyxia babies being carried out now": This statement seems to be misplaced. Furthermore, it does not have an associated bibliographical reference.*

Primary objective

- 1) *To determine the selected hematological effects of delayed cord clamping and placental transfusion on premature (<37 weeks) neonates after birth, and at one and 4-month follow-up <37 weeks) neonates after birth, and at one and 4-month follow-up: What is the lower limit of the gestational age range? Please, indicate the lower limit of gestation (i.e. 28 weeks).*

Methods

- 1) *Please indicate the range of gestation time (lower and upper limits).*
- 2) *Intervention and Blinding: "...Although, Grajeda [2] had reported slightly better results, with the infant placed at the level of the placenta": this statement is not relevant in the Methods section but it is important to move it to the Discussion section.*
- 3) *"All aspects of obstetric care were managed according to standard practice at the hospital" It does not describe how do you do cesarean sections to keep the newborn below the vulva and subsequently on the maternal abdomen. Both interventions could be complicated by the cord longitudinal size. Also, maintaining aseptically conditions could be difficult. Please, explain how do you proceed.*
- 4) *What is the vein from which the samples are taken?*
- 5) *Please, name and/or describe measuring instruments as questionnaires*
- 6) *It would be necessary to determine the Hb values to consider anaemia at different times. It should even vary within the values according to the degree of prematurity.*

Results

- 1) *Table 1: Birth Weight and Apgar Score are not baseline characteristics.*
- 2) *The ranges of reported values for each variable are missing. This is necessary to know in order to know what type of premature infants were included.*
- 3) *What are the APGAR values at 5 min? or Why was the Apgar Score not recorded at 5 minutes?*
- 4) *The high percentage of cesarean sections is striking, considering that the place of study is a developing country. What is the caesarean rate of Bhavnagar, Gujarat?*

Discussion

- 1) It needs to improve the quality of the comparisons of the findings with previous studies. It needs to be rewritten completely.

Conclusions

- 1) *Maybe it will be modified due to all the observations made.*

References

- 1) *References need to be optimized/improved and updated.*