

Abstract Title:

Optimizing Placental Transfusion Benefit by Targeting Three Minutes of Delayed Cord Clamping at Birth

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Abstract Description:

Introduction: Delayed cord clamping (DCC) is beneficial to newborns in optimizing their transition from fetal to neonatal life and improving both term and preterm infant outcomes. We implemented 1 minute DCC for all newborns in 2011 and increased the minimal duration to 2 minutes in 2016 and 3 minutes in 2018 in order to optimize the benefits of placental transfusion.

Objective: Our goal is to evaluate the success of implementing the longer duration of DCC in newborns born at different gestational age.

Method: We obtained delivery room data on duration of DCC from all births in our center from January 2016 to Nov 2018. We summarized the percent of infants that received 1, 2 and 3 minutes DCC in gestational age categories of late preterm (34-36 weeks), and term (37-42 weeks GA) infants monthly and quarterly in preterm (23-33 weeks) infants.

Results: There were 9112 consecutive live births during the study period. Of those, 8710 (95.6%) had documentation on the duration of DCC. There were 7969 (91%) term, 539 (6%) late preterm, and 203 (2%) preterm infants. During the study overall, 372 (4%) received <60s, 1851 (21%) received 60-119s, 3981 (46%) received 120-179s, and 2504 (29%) received ≥180s DCC. Figure 1, 2 and 3 show the duration of DCC in the gestational age subgroups over the study period and Figure 4 shows the overall distribution.

Conclusion: Targeting 3 minutes of DCC assures that all infants, especially >90% of very preterm infants achieve at least 60s of DCC that is recommended by World Health Organization, Neonatal Resuscitation Program, and American College of Obstetrics and Gynecology. We can consistently optimize placental transfusion for all newborns with

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increasing the goal of DCC to 3 minutes. A collaborative approach including the newborn and labor and delivery obstetric staff and providers is essential to the successful implementation of DCC.

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