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Current red blood cell and platelet transfusion practices in Canadian neonatal intensive care units

Background

Red blood cell and platelet transfusions are often prescribed in preterm infants. Consensus on the best transfusion practices in this population has still not been reached, causing disparities in neonatal care. The objective of this study is to provide updated data on current red blood cell and platelet transfusion practices in preterm neonates regarding thresholds and justifications associated with the decision to transfuse.

Study Design and Methods

An electronic survey was sent to one neonatology representative of each center of the Canadian Neonatal Network (31 sites). Descriptive data from each center was collected from the Network's work database.

Results

More than half of the respondents (54.8%) have a red blood cell transfusion protocol, while only 32.3% of centers have a platelet transfusion protocol. The most commonly reported justification for red blood cell transfusion is low levels of hemoglobin (100%), while the severity of illness and hemodynamic instability were also frequently mentioned (58.1% and 35.5%). For platelet transfusion justifications, the most reported is low platelet count (96.8%), followed by significant bleeding (93.6%) and severity of illness (35.5%). The reported thresholds also vary greatly depending on the presence of oxygen support for red blood cell transfusions and the occurrence of bleeding or invasive procedures for platelets.

Discussion

There is great variability between Canadian centers concerning red blood cells and platelet transfusions in preterm neonates. Practice guidelines should be established for better oversight of transfusion practices

Biography

My research program aims to better understand the impact of delayed cord clamping (DCC) in premature twins and to learn about current practices in DCC. This is important because it will fill an important gap in understanding the physiology of postnatal transition after DCC in different populations of preterm infants and help answer the question: "Which cord management strategy is best and for whom?" This work will advance knowledge in order to achieve a more personalized approach in the delay of cord clamping in premature babies.