To Transfuse or Not to Transfuse?

Preoperative Transfusion Practices for Pediatric Sickle Cell Patients Undergoing Central Venous Access Procedures

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Introduction

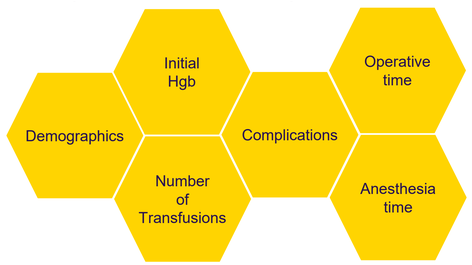
- "Low certainty evidence"
- Surgeries >1 hr. + general anesthesia
- Blood transfusions ≠ improved outcomes

Objectives

- The **aim** of the study is to investigate institutional practices & evaluate post-operative outcomes of Sickle Cell Disease (SCD) patients undergoing central venous access procedures, with the hope of delineating practice patterns in this population.
- Our **hypothesis** is that blood transfusions for patients with SCD do not significantly improve patient outcomes

Methods

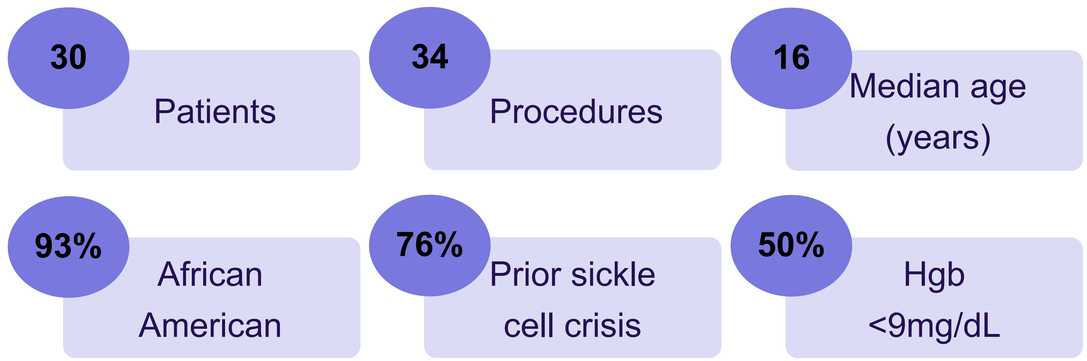
- Retrospective chart review from 2018-2022
- SCD patients with a line placement or removal



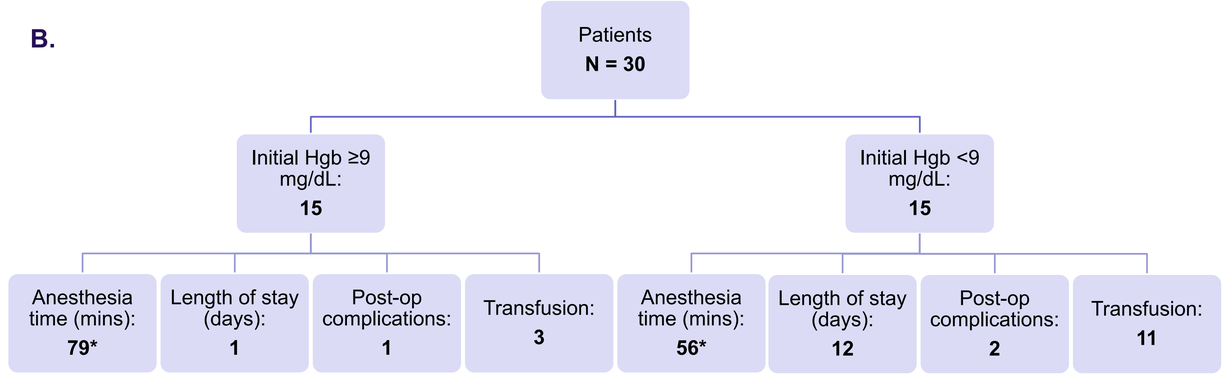
- Statistical analysis was performed using Fisher exact and Wilcoxon rank sum tests

Results

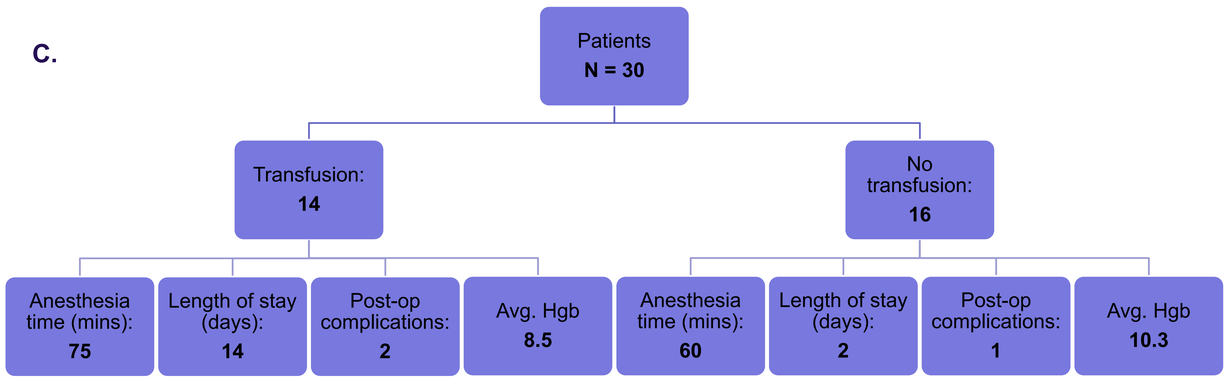
A.



B.



C.



A. Patient demographics including initial hemoglobin, previous sickle cell crises, age, race, etc. **B.** Initial hemoglobin (mg/dL) status and association with peri-operative variables. Anesthesia times were significant between initial hemoglobin *p = 0.03 **C.** Transfusion status and association with peri-operative variables.

Recommendations

Lack of Standard Guidelines → Inconsistent Management → Multidisciplinary Prospective Studies

- The lack of standardized guidelines has led to a discrepancy in pre-operative care of SCD patients
- However broader studies will be needed to make formalized conclusions on care

Conclusions

- We encountered variability in the pre-operative transfusion threshold of patients undergoing venous access procedures
- Outcomes remained similar with no significant differences based on pre-operative hemoglobin or transfusion rates
- Future studies focused on quality, safety, and resource allocation are needed for development of practice recommendations
- The eventual development of an evidence-based, standardized protocol is necessary to minimize complications and provide consistent, optimal care

Disclosures

LSU Health Sciences Center and Children's Hospital of New Orleans have approved this study through their institutional review board. We have no disclosures.