Management and Outcomes of Obstetric Patients who Decline Allogeneic Blood Transfusion

Emmarie Myers, MD; Ananda J. Thomas, BA; Anjana Sekaran, MD; Janet Adegboye, MD: Mellany Stanislaus, MD; Steven M. Frank, MD; Jamie Murphy, MD

Johns Hopkins University, School of Medicine, Department of Anesthesiology and Critical Care Medicine, Baltimore, MD

Background & Aims

- For the Jehovah's witness parturient, the right to decline blood products requires a multi-disciplinary effort for optimal care.
- Since the inception of the Bloodless medicine program ten years ago, the Johns Hopkins Hospital has provided care to patients without the use of allogeneic blood products by optimizing their pre-operative hemoglobin levels, advocating for less-invasive surgical procedures and minimizing iatrogenic blood loss.
- This study aims to identify and analyze patient care strategies and outcomes in this population.

Methods

- Retrospective chart review of obstetric patients from 2012-2022
- Only patients who declined allogeneic blood transfusions (no provisional acceptances included)
- 88 patients (encompassing 124 individual deliveries)
- Collected data on demographics, patient comorbidities, delivery method, maternal and fetal outcomes, and blood management methods

Table 1: Patient Demographics

	N= 124
Age, years	30 (25-35)
BMI	33.0 (29.5-38.3)
Comorbidities	
Hypertensive Disorder[A]	43 (34.7)
Diabetes mellitus	14 (11.3)
Obesity	80 (64.5)
Prenatal Anemia	100 (80.6)
Singleton pregnancy	119 (96.0)
Twin pregnancy	5 (4.0)
Delivery Mode	
Vaginal[B]	79 (63.7)
Cesarean[B]	45 (36.3)
Blood Loss, cc	400 (250-800)
≥ 1000 cc	18 (14.5)
Second-Line Postpartum Uterotonics[C]	54 (43.5)
Maternal Mortality	0 (0)
Fetal Outcome	
Neonatal Demise	2 (1.6)
Intrauterine Fetal Demise	2 (1.6)

124 deliveries (88 women); 59 delivered once, 29 delivered more than once

[A] Includes PEC/EC, HTN, gHTN, HELLP

[B] Includes Spontaneous Vaginal, Forceps/Vacuum Assisted Vaginal, Low Transverse Cesarean and Classical Cesarean Section

[C] Includes methylergonovine, misoprostol, carboprost (not including postpartum oxytocin)

Data reported as median (IQR) or number (%)

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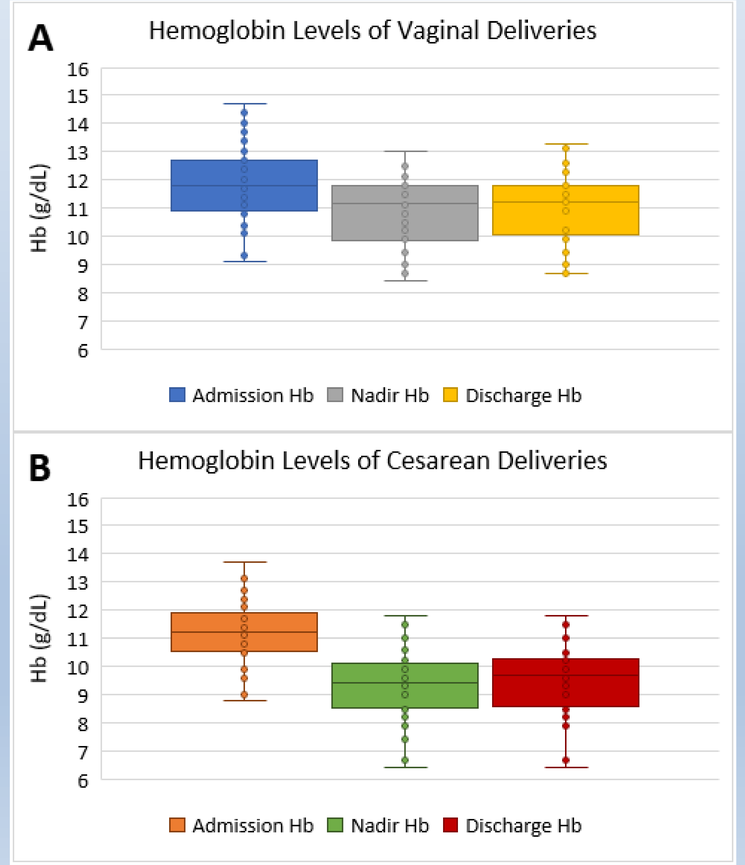
Results

- 124 deliveries: 36% cesarean deliveries (CDs), 64% vaginal deliveries (VDs)
- Prenatal anemia present in 81% of patients:
  - 53% received oral iron
  - 16% received IV iron infusions
  - 12% received vitamin B12 or folate
- Postpartum hemorrhage (QBL >1000ml) was observed in 40% of the CDs
  - no PPH in vaginal deliveries
- Cell salvage present in 69% of CDs* (blood returned to 5 patients)
- Second-line uterotonics used to control bleeding in 43.5% of patients
- The lowest reported Nadir Hb reported was 6.4 g/dL and 8.4 g/dL in the CDs and VDs groups, respectively
- No emergency hysterectomies and no peripartum maternal mortalities

*only for those patients who indicated cell salvage was acceptable



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Key Points

- The Bloodless Medicine program has managed Jehovah's Witness obstetric patients for the past decade with no maternal mortalities or unplanned hysterectomies
- Prenatal consultation with Bloodless Medicine team to determine patient preferences and allowable products or blood management techniques
- Treatment of prenatal anemia with iron and vitamin B12/folate
- Intrapartum blood management strategies including early utilization of second-line uterotonics, cell salvage, and tranexamic acid are crucial in managing obstetric bleeding while avoiding transfusion
- The next steps for this project will be to analyze the difference in clinical outcomes between obstetric patients who decline blood transfusion to those who accept blood transfusion