

Patterns of transfusion in obstetrical patients: Information from the IMPACT® Online database

Robert L. Thurer, Thomas Precopio, Patricia Parce, Mark A. Popovsky

Haemonetics Corporation, Braintree, MA

Introduction

Little is known about current status of transfusion in obstetrical patients. We sought to understand the potential opportunities for improving blood management by analyzing transfusion data from a large number of patients having both vaginal and Caesarian deliveries.

Methods

Impact® Online (Haemonetics, Braintree, MA) is a newly developed data mining tool which extracts data regarding transfusion from hospital information systems. The IMPACT® Online database allowed us to identify 74,065 patients who delivered vaginally and 52,253 who had Caesarian sections at 29 hospitals throughout the United States. We analyzed this information with the goal of evaluating the appropriateness of transfusion and identifying opportunities for improvement in blood management.

Poster abstract
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Incidence of Transfusion by Nadir Hgb

Nadir Hgb (g/dL)	Vaginal % Transfused	C-Section % Transfused
<6	60.4%	76.8%
6-6.9	39.9%	47.5%
7-7.9	7.9%	14.6%
8-8.9	1.1%	3.3%
9-9.9	0.3%	0.9%
10-10.9	0.1%	0.3%
11-11.9	0.0%	0.3%
≥ 12	0.0%	0.2%

Units Transfused and the Associated Final Hgb

Units Transfused	Vaginal Delivery		Caesarian delivery	
	Patients Transfused (%)	Mean Final Hgb (g/dL)	Patients Transfused (%)	Mean Final Hgb (g/dL)
1	28 (7%)	9.06	146 (11%)	9.33
2	265 (65%)	8.76	713 (55%)	9.00
3	47 (12%)	8.99	131 (10%)	9.36
4	43 (11%)	9.01	153 (12%)	9.34
5	7 (2%)	9.56	32 (2%)	9.55
>5	15 (4%)	9.55	128 (10%)	9.78

Results

For patients delivering vaginally, 0.55% received RBC, 0.05% received platelets and 0.05% received FFP. For patients having Caesarian section 2.49% received RBC, 0.40% received platelets and 0.34% received FFP.

Conclusions

- § Based on the nadir hemoglobin, transfusions were used sparingly.
- § The final hemoglobin data suggests “over transfusion” happens frequently.
- § Two unit transfusions were most common. However, one unit or no transfusion may have been sufficient for many of these patients.
- § There is an opportunity to improve transfusion practice in obstetrical patients.