

Platelets in Postpartum Haemorrhage : Who needs them?

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Introduction

- ❑ Postpartum haemorrhage (PPH) is a significant cause of maternal morbidity¹
 - ❑ Royal college of obstetrics and gynaecology (RCOG) guidance recommends platelet (plt) transfusion if the count falls below $75 \times 10^9/L$ during haemorrhage²
 - ❑ Limited studies describing how plt counts respond during PPH
 - ❑ Understanding risk factors for plt transfusion during PPH would aid clinicians
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Methods

- ❑ Prospective single centre observational study (April 2012-13)
ethics committee approved
 - ❑ Women were enrolled with PPH of 1000 mL or clinical concern
 - ❑ Clinicians following RCOG guidelines
 - ❑ Major obstetric haemorrhage protocol released 4RBC + 4FFP.
Plt issued on request
 - ❑ FBC at study entry, during and after PPH
 - ❑ Post hoc analysis of women transfused platelets, previously
described dataset³
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Results

- Deliveries n = 6187
 - 356 consecutive women with PPH recruited
 - 12 women transfused platelets
 - 0.2% of all deliveries
 - 3.4% of women with PPH >1000 mL
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Platelet transfusion (n = 12)

Precipitant of bleed	Pre-delivery plt count	Bleed Volume
Abruption n = 3	119	2660
	151	3500
	193	2200
Atony n = 3	216	5500
	151	5300
	259	5000
Retained Placenta n = 1	169	12560
Surgical Bleed n = 1	93	1400
No Precipitant Recorded n = 4	26	3200
	87	1400
	98	800
	103	400

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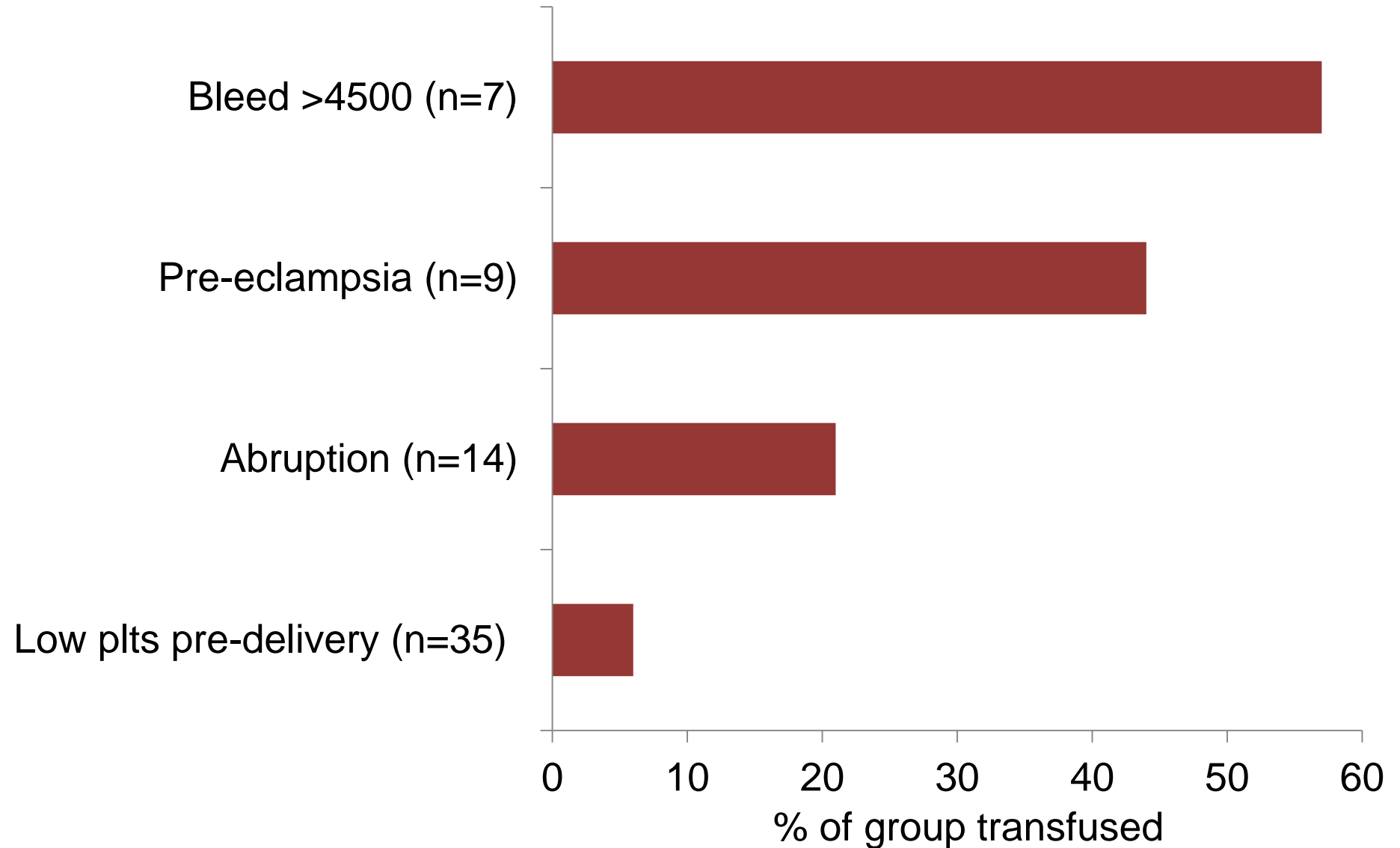
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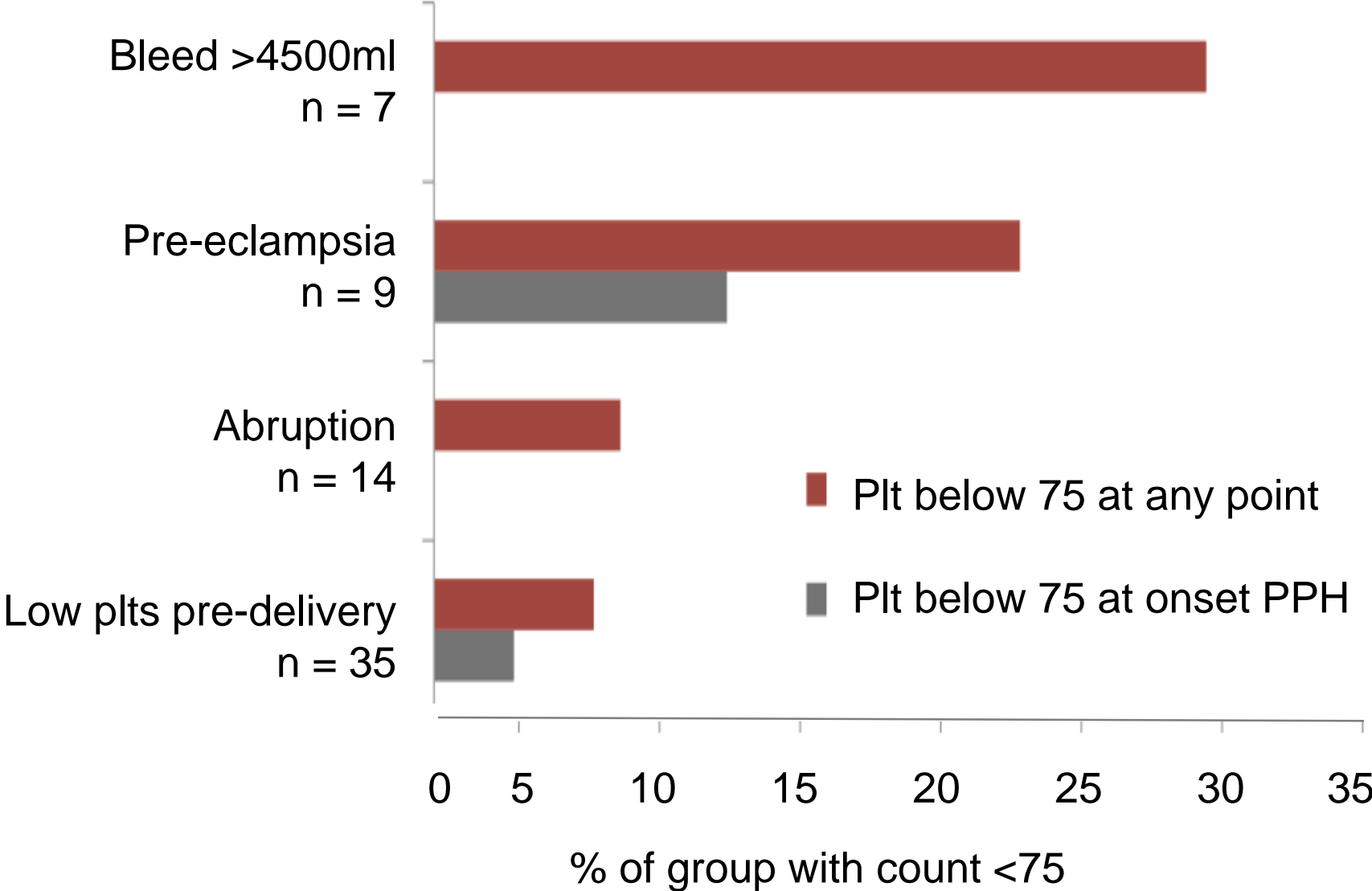
Platelet transfusion by risk factor



Results

- Platelet transfusion was a clinical decision
 - Do these trends translate into documented platelet counts?
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Platelet count <75 by risk factor



Discussion

- Did all patients receive platelets who should have?
 - 1 patient plt count <75 after PPH, did not receive plts
 - 1 patient plt count <50 despite platelet transfusion

 - Weakness of study
 - Secondary analysis of published data set
 - Inadequate data on risk factors in whole population
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Conclusions

- Plt transfusion rarely required in PPH
 - <4% of cases

 - Risk factors for plt transfusion identified
 - Pre-delivery thrombocytopenia (pre-eclampsia)
 - Abruptio
 - Bleed >4500 mL

 - No women without risk factors (n=292) required plts

 - No evidence for routine use of plt transfusion in PPH
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Thank you

References

1. Lennox C, Marr L. Scottish confidential audit of severe maternal morbidity: reducing avoidable harm. *Ninth Annual Report*. Scotland: Healthcare Improvement Scotland; 2013
 1. RCOG. Postpartum Haemorrhage, Prevention and Management (Green-top Guideline No. 52) Published: 11/05/2009
 1. Collins, P.W., Lilley, G., Bruynseels, D. et al, Fibrin-based clot formation as an early and rapid biomarker for progression of postpartum hemorrhage: a prospective study. *Blood*. 2014;124:1727–17364.
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