Current red cell transfusion practice: are we too liberal with this precious resource?

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Introduction

Current National Institute for Health and Care Excellence (NICE) guidance recommends restrictive thresholds for red cell transfusion, dependent upon patient factors such as haemodynamic status.[1]

NICE also recommends that individuals should be provided with information regarding the risks and benefits of blood transfusion and those patients should give informed consent prior to blood transfusion.

Informed consent is a recurrent theme in the Infected Blood Inquiry.[2]

We audited red cell transfusion (RCTx) practices according to NICE guidelines and examined documentation around consent.

Materials and methods

The study consisted of 4 parts.

- Part 1: Audit of medical inpatients in receipt of RCTx between January and March 2018. Data were collected on indication for transfusion, comorbidities and eligibility for a restrictive approach.
- Part 2: Review of written documentation in the patient records on information given and consent to RCTx.
- Part 3: Data on length of stay and mortality following RCTx.
- Part 4: Online survey of doctors questioning practice around documentation of information provided and consent to RCTx. The survey also included two clinical cases to examine whether clinicians used a restrictive threshold or not.

Results and discussion

Part 1

Records of 82 patients were evaluated. Table 1 outlines the main indications for RCTx using the national blood transfusion codes.[3] Median baseline haemoglobin (Hb) pre-transfusion was 69 g/L (interquartile range (IQR) 66–76) and post-transfusion was 85 g/L (IQR 80–96); median number of units of blood transfused was 2 units; 89% of patients were eligible for a restrictive approach but this was practised in only 40% of patients; 86% of patients had their Hb checked in the 12–24 hours following transfusion and 57% had Hb checked after each individual unit excluding those that died.

Table 1. Main indications for red cell transfusion

Indications	Not suitable for restrictive transfusion, n (%)	Suitable for restrictive transfusion, n (%)	Total, n (%)
Acute bleeding with haemodynamic instability	3 (3.7)	4 (4.9)	7 (8.5)
Haemoglobin ≤70 g/L (stable target 70–90 g/L)	1 (1.2)	55 (67.1)	56 (68.3)
Haemoglobin ≤80 g/L (stable target 80–100 g/L if cardiovascular disease)	1 (1.2)	12 (14.6)	13 (15.9)
Chronic transfusion dependent anaemia	3 (3.7)	2 (2.4)	5 (6.1)
Radiotherapy haemoglobin ≤110 g/L	1 (1.2)	0 (0)	1 (1.2)
Total	**9 (11.0)**	**73 (89.0)**	**82 (100)**

Part 2

Sixty-nine records were reviewed for documentation around consent and information, Table 2 shows the breakdown. It was assumed patients with cognitive impairment were treated in their best interest. In patients with no history of cognitive impairment (n=48), only 35% had evidence of consent documented.

Part 3

Haematological or solid organ palliative malignancy was recorded in 24 patients. Median length of stay was 13.5 days; 55% of patients died within 6 months of discharge and 60% within 12 months.

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Table 2. Breakdown of records reviewed for documentation around consent and information

Consent	Information given, n (%)	Information not given, n (%)	Unknown, n (%)
Assumed	1 (1.2)	18 (22.0)	2 (2.4)
No	0 (0)	31 (37.8)	0 (0)
Yes	11 (13.4)	5 (6.1)	1 (1.2)
Unknown	0 (0)	0 (0)	13 (15.9)

Part 4

There were 37 responses from a wide spectrum of training grades; 73% stated they always or sometimes obtained consent prior to RCTx, but only 40% document this consent process; 90% of respondents gave the reason for transfusion but about 50% would discuss the risks; over 75% of individuals would use a restrictive transfusion threshold depending on clinical history.

Conclusion

Despite clear guidelines, restrictive transfusions were not used: most patients received two units regardless of target or initial Hb; most patients did not have an Hb checked post each unit – which would guide the need for further units; and consent to transfusion and provision of information surrounding it is poorly documented.

We plan to deliver education sessions to all clinicians in our trust and re-audit our practice following this. ■

Conflicts of interest

None declared.

References

1 National Institute for Health and Care Excellence. *Blood transfusion. NICE guideline [NG24]*. NICE, 2015. www.nice.org.uk/guidance/ng24 [Accessed 25 October 2019].
2 Infected Blood Inquiry. *Terms of reference*. IBI, 2018. www.infectedbloodinquiry.org.uk [Accessed 25 October 2019].
3 National Blood Transfusion Committee. *Indication codes for transfusion – an audit tool*. NHS, 2016. www.transfusionguidelines.org/document-library/documents/nbtc-indication-codes-june-2016v2 [Accessed 25 October 2019].