Audit of Perioperative anaemia in Vascular patients at the Countess of Chester Hospital, UK

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Background

How common is Anaemia?
Anaemia accounts for 8.8% of disability from all conditions.

In the elderly, 11% of males and 10.2% of females aged > 65 years, rising to 26.1% and 20.1% respectively in those > 85 years old.

Most of these patients are elderly, have IHD, diabetics, and have chronic kidney disease.

Partridge J, Harari D, Gossage J, Dhesi J. Anaemia in the older surgical patient: a review of prevalence, causes, implications and management. Journal of the Royal Society of Medicine 2013; 106: 269–77.

NICE guidelines (NG 24)

Thresholds and targets ▶ When using a restrictive red blood cell transfusion threshold, consider a threshold of 70 g/litre (80 for ACS) and a haemoglobin concentration target of 70–90 g/litre (80-100 for ACS) after transfusion.

Alternatives to blood transfusion for patients having surgery:

Erythropoietin
Intravenous and oral iron
Cell salvage and tranexamic acid

Consider intra-operative cell salvage with tranexamic acid for patients who are expected to lose a very high volume of blood (for example in cardiac and complex vascular surgery, major obstetric procedures, and pelvic reconstruction and scoliosis surgery).

How are we doing at COCH?

AUD22097
Preoperative Anaemia in vascular Patients

Primary: Audit compliance with NICE Guidance re anaemia

Secondary: Pre-op anaemia prevalence, vascular surgical pts?
Association b/w pre-op anaemia & peri-op transfusion?
Association b/w pre-op anaemia & LOS in hospital?

Methods

Period: 18/04/2016 – 02/06/2016

Methods 1
Data collected and how:

- Age , sex , patient reference, date/type of surgery
- Emergency vs Elective
- Preoperative (Hb,Fe,B12,Folate Rx, Transfusion)
- Intraoperative autologous blood transfusion.
- Postoperative (Hb , transfusion, LOS in hospital)
- Data were collected using the Meditech / Evolve

Methods 2
Data not collected:

- Patients who died were excluded (skew)
- Cell saver usage was not considered as intraoperative blood transfusion (looking at autologous blood Tx only)

Results

General information and demographics

18/04/16 ▶ 02/06/16.

Total number of patients ▶ 61 (65% M)

Age range: 31 ▶ 89 years old

≤ 70 y = 21 34.4%

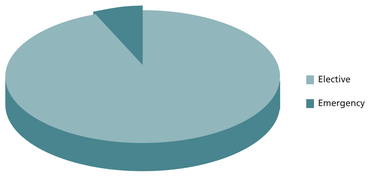
70-80 y = 19 patients 31%

≥ 80 y = 21 patients 34.4%

	Anaemic preoperative vascular patients (33=54%)	Non Anaemic preoperative vascular patients (28=45%)
Preoperative Fe++	2	----
Preoperative B12	2	----
Preoperative Folate	2	----
Preoperative Blood (autolog)	9	----
Intraoperative blood	13	2
Anaemic Postop	15	12
Postoperative Blood	14	2
Received blood in general	**17 (51.5%)**	**4 (14%)**

Number of elective cases 58

Number of emergency cases 3



Number of anemic patients preoperatively 33 = 54%

Number of anemic patients postoperatively (T+1) 49 = 80%

Number of non anaemic patients who received blood transfusion ▼ 3 (10%) -Fem.pop . -AAA resec. -AAA resec.

Number of days in hospital

Mean (SD)
Median (IQR) [Range]

Anaemic Mean 20.4

Non-Anaemic Mean 10.6

Mean (SD) = 20.4 (18.5)
Median (IQR) [Range] = 10 (5-40) [1-75]

Mean (SD)
Median (IQR) (Range)

Conclusions

Preoperative Anaemia is a common finding in vascular surgical patients.

Preoperative Anaemia is associated with intraoperative and postoperative autologous blood transfusion as well as increased hosp LOS CoCH preoperative anaemia in vasc surg pts is mostly treated with blood transfusion.

NG24 recommends using oral and intravenous Fe++ for Rx preoperative anaemia and adopting a restrictive transfusion protocol – we are not compliant (based on data here)

Recommendations

1. Consider intravenous Fe treatment preoperatively for anaemic vascular patients, even for those not hospitalised but when surgery is imminent
2. Treatment should start after/at preoperative assessment clinic (or need identified earlier such as at surgical OPD review and decision for surgery)
3. Transfusion point should be individualized according to the patient's history, procedure to be done and time available before surgery.