

The Impact of a High-Risk Pre-Assessment Clinic on Pre-Operative Anaemia in Major Colorectal Surgery Patients

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Introduction

The Perioperative Quality Improvement Programme (PQIP) lists perioperative anaemia as one of the top five national improvement opportunities for 2018-19 ¹. Pre-operative anaemia has an average incidence of 39.1% in major surgical patients ² and 55% in colorectal patients ³. It increases perioperative morbidity, mortality, and rates of blood transfusion ². A treatment algorithm for the investigation and optimisation of pre-operative anaemia has been proposed ². Patients should receive IV iron transfusion if surgery is due within six weeks and: ²

- Ferritin <30 mg/L OR
 - Ferritin >30 mg/L but transferrin saturation <20% OR C-reactive protein >5 mg/L
- In February 2018, we introduced a high-risk pre-assessment clinic to optimise medical issues, including anaemia, for patients undergoing major colorectal surgery.

Our Pathway



1) NIAA Health Services Research Centre. Perioperative Quality Improvement Programme. 2018. Available from: <https://pqip.org.uk/Files/Uploaded/PQIP%20Annual%20Report%202017-18.pdf> (accessed 25th March 2019)
 2) Munting KE, Klein AA. Optimisation of pre-operative anaemia in patients before elective major surgery - why, who, when and how? *Anaesthesia*. 2019 Jan;74 Suppl 1:49-57
 3) Munoz, M, Gomez-Ramirez, S, Campos, A, Ruiz, J, Liumbruno, GM. Pre-operative anaemia: prevalence, consequences and approaches to management. *Blood Transfusion* 2015; 13: 370–9

Methods

A retrospective case note review of one hundred patients due to undergo major colorectal surgery was undertaken. This included fifty prior to the introduction of the clinic (Pre-Clinic), and fifty patients after its introduction (Post-Clinic). Twenty-one patients operated on for non-cancer related reasons were excluded. Anaemia was defined as haemoglobin <130 g/L.

Results

| | Pre-Clinic (n=37) | Post-Clinic (n=42) |
|---|-------------------|--------------------|
| Incidence of pre-operative anaemia | 54% | 52% |
| % of anaemic patients where ferritin investigated | 55% | 91% |
| % of anaemic patients with ferritin >30 mg/L where both T-sat and CRP levels investigated | 0% | 66% |
| % of anaemic patients with ferritin <30 mg/L receiving intravenous iron transfusion | 0% (0/7) | 88% (7/8) |
| % of anaemic patients with ferritin >30 mg/L but T-sat <20% OR CRP >5 mg/L receiving intravenous iron transfusion | N/A | 66% (4/6) |

Conclusion

We have demonstrated significant improvements in the investigation and optimisation of pre-operative anaemia in accordance with the above treatment algorithm ². There remains further improvements to be made, particularly in the investigation and optimisation of those patients with ferritin levels >30 mg/L but abnormal T-sat and CRP.

Total Number of IV Iron Transfusions in One Year Pre- and Post-Clinic

