



Post-operative Haemoglobin guidelines

Policy

Patients who have undergone surgical repair of fractured Neck of Femur should have their post-operative haemoglobin maintained above 90g/L, and above 100g/L in those with a history of ischaemic heart disease.

Rationale

In frail patients, postoperative anaemia may cause a range of symptoms, including hypotension. Maintaining postoperative Haemoglobin above these levels will aid mobility and rehabilitation, helping to return patients to their feet more quickly following surgery. It will also help to reduce the rate of postoperative complications, such as ischaemic heart disease and acute kidney injury. It is recognised that this will lead to an increase in the number of blood transfusions in the postoperative period.

Evidence

These Haemoglobin levels have been selected following a multi-specialty review of existing evidence and discussions among members of the WFFN. Anaemia has been shown to impair functional mobility in the early postoperative phase and be an independent risk factor for patients not being able to mobilise¹. Mobilising day 1 is a key indicator as to the patient's future recovery and associated with reducing a number of risk factors. Walking distance at discharge has also been shown to be related to Haemoglobin levels². Studies have also shown liberal postoperative transfusion triggers to reduce the incidence of Acute Kidney injury³, cardiac complications⁴ and even mortality^{4,5} when compared to restrictive transfusion triggers in frail patients.

References

1. Foss et al. *Anaemia impedes functional mobility after hip fracture surgery*. Age and Ageing. 2008; 37 (2): 173-178.
2. Lawrence VA et al. *Higher hb level is associated with better early functional recovery after hip fracture repair*. Transfusion. 2003;43(12):1717–22.
3. Hovaguimian F et al. *Restrictive versus Liberal Transfusion Strategy in the Perioperative and Acute Care Settings*. Anesthesiology. 2016; 125: 46-61
4. Foss et al. *The effects of liberal versus restrictive transfusion thresholds on ambulation after hip fracture surgery*. Transfusion. 2009; 49: 227-234
5. Gregersen et al. *Post-operative blood transfusion strategy in frail, anaemic elderly patients with hip fracture*. Acta Orthop. 2015; 86 (3): 363-372.