Perioperative Anemia Management

POSTOPERATIVE CARE

Iron Corner
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SUMMARY

- Perioperative anemia (before, during, and after surgery) is linked to higher morbidity, mortality, longer recovery, and hospital stays.
- Postoperative anemia is common and often under-recognized, yet it can delay wound healing, rehabilitation, and increase infection risk.
- Proactive postoperative evaluation and treatment of anemia is essential for improving outcomes and reducing transfusion needs.
- It is imperative that all postoperative patients be evaluated for micronutrient deficiencies and anemia again within one month after surgery, and up to six months postoperatively until optimized. Following up with the patient's primary care provider is essential.

How Common Is Anemia in Postoperative Surgical Patients?

- 75%-90% of certain surgical patients may be anemic postoperatively, especially after significant blood loss or inflammatory responses.
- Postoperative anemia is highly prevalent after major surgeries such as orthopedic and colorectal procedures.

What Is the Impact of Anemia on Clinical Outcomes in Postoperative Surgical Patients?

- Postoperative anemia can increase the risk of cardiac events, infections, and delayed wound healing.
- Postoperative anemia contributes to prolonging hospital stays and reducing quality of recovery.
- Patients with cardiovascular disease are more vulnerable to complications from even mild postoperative anemia.

What Are the Key Postoperative Goals?

- Restore the patient's hemoglobin to their preoperative baseline
- Correct iron deficiency to support recovery
- Monitor and replete micronutrients as needed
- Ensure follow-up for ongoing anemia management after discharge

What Formal Guidance Is Recommended for Diagnosis and Management of Perioperative Anemia?

- WHO and international consensus statements support:
  - Early identification and correction of anemia
  - Routine anemia screening and iron studies postoperatively
  - Use of IV iron and restrictive transfusion strategies

What Are the Recommended Postoperative Management Strategies?

- Evaluation
  - Monitor hemoglobin trends postoperatively
  - Assess for iron deficiency, blood loss, and inflammation
  - Repeat labs as clinically indicated: Hgb, ferritin, TSAT, CRP, RET-He, B-12
- Treatment
  - Iron therapy for iron deficiency (IV preferred post-op)
  - IV iron is safe and effective in the post-op period for rapid repletion
  - Consider Erythropoiesis-Stimulating Agents (ESAs) in select cases
  - Address any micronutrient deficiencies (B-12, folate, vitamin D)
- Minimize Transfusion
  - Avoid unnecessary transfusions; follow restrictive transfusion thresholds:
    - Transfusions should be symptom-based, not number-driven alone
    - Consider RBC transfusion if Hgb <7g/dL unless symptomatic or high-risk (e.g., CAD)

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