PREOPERATIVE INTRAVENOUS IRON TO TREAT ANAEMIA BEFORE MAJOR ORTHOPEDIC SURGERY

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Background and Importance
Preoperative anaemia affects a high proportion of patients undergoing major orthopedic surgery and is associated with poor clinical outcomes.

The scheduling of a preoperative visit with sufficient notice (at least 2-3 weeks before surgery), enables us to treat the anaemia and/or improve preoperative hemoglobin levels.

Intravenous iron with or without erythropoietin are treatments for optimizing anaemia, with good levels of scientific evidence.

Aim and Objectives
To evaluate the effectiveness of intravenous ferric carboxymaltose (FCM) administered preoperatively in patients undergoing elective orthopedic surgery.

Materials and Methods
Retrospective Observational Study conducted between January and December 2021

PATIENT BLOOD MANAGEMENT (PBM) STRATEGY :
- Detect preoperative anaemia (Hb < 13 g/dL), stimulation of erythropoiesis, correct haemostasis, improve patient’s conditions

ORTHOPEDIC SURGEON → ANESTHESIOLOGIST → INTERNAL MEDICINE → Prescription and administration FCM ± rHuEPO (40,000 UI)

Decide type of surgery, operation date, order preoperative assessment test (at least 30 days before surgery)

Preoperative assessment visit 7-14 days before elective surgery

Endpoints included:
Age, sex, dose FCM administrated, type of surgery, time between administration and surgery, Hb levels just before surgery and adverse events

Results
165 patients: 86.6 %

Average age: 71 years (ICR: 65-80)

Total patients with Hb > 13 g/dL just before surgery: 73.3 %

No severe adverse events or signs of hypersensibility related to intravenous FCM therapy were observed (monitored during and for at least 30 min after administration).

Limitations: no evidence with respect to outcomes such as quality of life, postoperative complications, morbidity and mortality.

Conclusion and Relevance

✓ The effectiveness of intravenous FCM to optimize Hb before surgery was moderate, adjuvant administration of rHuEPO improved the results.

✓ It may be useful to investigate possible predictive factors that may impact intravenous FCM treatment success.

✓ The study suggest that current preoperative intravenous iron protocol should be revised to ensure proper use and optimisation of preoperative Hb levels.

✓ Additional high quality studies are needed to determine definitively the clinical effectiveness of intravenous FCM.

References