

Anémie péri-opératoire

ID: 237

Perioperative iron deficiency in patients scheduled for major elective surgeries: a French prospective multicenter cross-sectional study

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Position du problème et objectif(s) de l'étude:

The management of perioperative iron deficiency is a component of the concept of "patient blood management". The objective of this study was to update French data on the prevalence of iron deficiency in patients scheduled for major surgery.

Matériel et méthodes:

This study was a prospective cross-sectional study in 46 centers specialized in orthopedic, cardiac, urologic/abdominal or gynecological surgery. The primary endpoint was the prevalence of iron deficiency at the time of surgery (D-1/D0) defined as serum ferritin <100 µg/L and/or transferrin saturation (TSAT) <20%. The study was approved by a national independent Ethics Committee ("CPP Nord-Ouest II") and written informed consent was obtained from all subjects participating in the trial.

Résultats & Discussion:

A total of 1494 patients (mean age, 65.7 years; women, 49.3%) were included from July 20, 2021 to January 3, 2022. The prevalence of iron deficiency in the 1494 patients at D-1/D0 was 47.0% (95% CI, 44.5-49.5). At 30 days after surgery, the prevalence of iron deficiency was 45.0% (95% CI, 42.0-48.0) in the 1085 patients with available data. The percentage of patients with anemia and/or iron deficiency increased from 53.6% at D-1/D0 to 71.3% at D30 ($p<0.0001$), mainly due to the increase of patients with both anemia and iron deficiency (from 12.2% at D-1/D0 to 32.4% at D30; $p<0.0001$). However, a treatment of anemia and/or iron deficiency was administered preoperatively to only 7.7% of patients and postoperatively to 21.7% (intravenous iron, 14.2%).

Conclusion:

Iron deficiency was present in half of patients scheduled for major surgery. However, few treatments to correct iron deficiency were implemented pre or postoperatively. There is an urgent need for action to improve these outcomes, including better patient blood management.

Les auteurs déclarent avoir une relation financière impliquant l'auteur ou ses proches (salaires, honoraires, soutien financier éducationnel) et susceptible d'affecter l'impartialité de la présentation.: Xavier CAPDEVILA: consulting fees from Vifor Pharma in the last three years; Sigismond LASOCKI: speaker honoraria from VIFOR Pharma, MASIMO, PFIZER, and fees as member of

advisory board and/or steering committee from VIFOR Pharma; Alexis

DUCHALAIS: no conflicts of interest;

Jean-Christophe RIGAL: during the past 5 years, lecture, consulting fees from VIFOR PHARMA, research grants from Haemonetics, Werfen, i-Sep congress registration fees from FRESENIUS, WERFEN and EDWARDS; other: Air Liquide Santé;

Patrice MERTL: fees for medical education from DePuy, royalties from X-Nov and Adler; Pierre

GHEWY: no conflicts of interest;

Frédéric FARIZON: no conflicts of interest;

Thomas LANZ: no conflicts of interest; Axel

BUCKERT: no conflicts of interest.

Samia BELARBIA: employee of CSL Vifor