The aim of this study was to assess the efficacy of preoperative intravenous (IV) iron infusion in optimizing hemoglobin (Hb) levels in anemic colorectal cancer patients” Wilson et al (2017).

Abstract:

BACKGROUND: In the treatment of preoperative anemia, which is associated with increased postoperative morbidity, iron supplementation can replace blood transfusion and erythropoiesis-stimulating agents. The aim of this study was to assess the efficacy of preoperative intravenous (IV) iron infusion in optimizing hemoglobin (Hb) levels in anemic colorectal cancer patients.

STUDY DESIGN AND METHODS: A retrospective cohort study was performed on patients who underwent surgery for colorectal cancer between 2010 and 2016 in a single teaching hospital. The primary outcome measure, the change in Hb level, was assessed by comparing anemic patients receiving usual care (UC; i.e. no iron therapy and no blood transfusion) with anemic patients receiving IV iron therapy (no blood transfusion).

RESULTS: A total of 758 patients with colorectal cancer were eligible, of whom 318 (41.9%)
had anemia. The IV and the UC groups included 52 and 153 patients with mean Hb levels at
diagnosis of 6.3 and 6.9 mmol/L, respectively. In the IV group, preoperative Hb level was
significantly increased compared to the UC group (0.65 mmol/L vs. 0.10 mmol/L, p < 0.001).
High increase in Hb level after iron infusion was associated with initial higher transferrin and
lower ferritin levels (high vs. poor responders: median transferrin 2.9 g/L vs. 2.7 g/L, median
ferritin 12 µg/L vs. 27 µg/L).

CONCLUSION: Implementation of IV iron therapy in anemic colorectal cancer patients leads to
a distinct increase of preoperative Hb level. IV iron therapy is most effective in patients
presenting with more severe anemia, and with higher transferrin and lower ferritin levels,
markers for an absolute iron deficiency (ID), compared to functional ID.

Reference:

Wilson, M.J., Dekker, J.W., Bruns, E., Borstlap, W., Jeekel, J., Zwaginga, J.J. and Schipperus, M.
(2017) Short-term effect of preoperative intravenous iron therapy in colorectal cancer

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