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LETTER TO THE EDITOR

Iron deficiency in Crohn's disease: Iron supplementation or disease control?

KEYWORDS
Crohn's disease;
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Ferritin

We read with interest the paper by Lugg S et al.: "Iron treatment and inflammatory bowel disease: What happens in real practice?[1] In this article, the authors describe how treatment with oral iron frequently fails to control anaemia, probably secondary to the side effects of oral iron. It is however important to highlight that iron deficiency in inflammatory bowel disease is frequently related to disease activity and severity, and management of the underlying inflammation is required to control the anaemia. We assessed which phenotypic characteristics of Crohn's disease are associated with iron deficiency in 171 adult Crohn's disease patients. Haemoglobin, C-reactive protein (CRP) and serum ferritin levels taken within 2 weeks of a colonoscopy were analysed. Serum ferritin <30 μg/L was taken to represent iron deficiency in patients with endoscopic and histologically quiescent disease while ferritin <100 μg/L was considered to represent iron deficiency in the presence of active disease, as recommended by international guidelines.[2]

37 patients (21.6%) had histological and endoscopic evidence of ongoing inflammation. 58 patients (33.9%) had low serum ferritin; 29 patients with quiescent disease (21.6%) had ferritin <30 μg/L while 29 patients with active disease (78.3%) had ferritin <100 μg/L. 62% of iron deficient patients were female versus 43% of patients with normal ferritin (Fisher's exact test *p*: 0.02). 29% of iron deficient patients had stricturing disease versus 16% of patients with normal ferritin (*p*: 0.04). Iron deficient patients were also more likely to be treated with infliximab (46.5%) and to have undergone surgery for Crohn's disease complications (38%) than patients who were not iron deficient (28% and 18.5% respectively) (*p*: 0.02 and *p*: 0.008). Iron deficiency was also significantly associated with elevated CRP levels (37.9% in iron deficient patients vs 10.6% in individuals with normal serum ferritin; *p*: <0.001).

Our results show that iron deficiency is present in 78.3% of patients with ongoing inflammation but in only 21.6% of patients with quiescent disease (*p*: <0.001). Induction and maintenance of remission, together with iron supplementation, are therefore necessary to improve iron deficiency. Immunosuppressant treatment with anti-tumour necrosis factor α therapy has been shown to improve iron deficiency by improving erythropoiesis.[3] Markers of Crohn's disease severity, like stricturing disease, requirement for infliximab use, and surgery appear to be significantly associated with iron deficiency, and patients with severe Crohn's disease types may benefit from aggressive immunosuppression and more frequent screening for iron deficiency.

Conflict of interest

We wish to confirm that there are no known conflicts of interest associated with this publication and there has been no significant financial support for this work that could have influenced its outcome.

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