Ferric maltol (Feraccru) for the treatment of iron deficiency anaemia in adults

Background

Iron deficiency anaemia (IDA) is common, with potential causes including dietary insufficiency, malabsorption (e.g. Coeliac Disease), blood transfusion, GI blood loss and functional IDA (formerly anaemia of chronic disease). Once IDA is identified treatment with iron replacement is recommended alongside investigation into the underlying cause. First line investigations in primary care are a full haematinics profile and tTG level. Referral for endoscopy, to exclude GI blood loss, may then be appropriate depending on the results.

Conventional iron replacement

Recommended iron replacement is with a conventional oral iron supplement e.g. ferrous sulfate, ferrous gluconate and ferrous fumarate. Haemoglobin levels should be checked after at least 4 weeks of treatment, with therapy continuing for 3 months after normalisation of the haemoglobin.

These iron supplements are commonly discontinued by patients due to GI side effects[1] of constipation, diarrhoea, epigastric pain and nausea. Side effects are dose-related, increasing alongside increased intestinal iron absorption. Strategies to reduce side effects include:

- taking supplements with or after food (foods such as eggs and tea, as well as drugs such as antacids and tetracyclines reduce absorption; ascorbic acid/ vitamin C increases absorption)
- reducing the dose frequency to once a day (now the recommended starting frequency for conventional supplements[2]) or one tablet on alternate days
- changing preparation to one containing a lower iron content (e.g. gluconate is 300mg per tablet vs 200mg in sulfate).

Intolerance may persist despite these measures, at which point alternative options are referral for iv iron or ferric maltol, an oral preparation with increased cost and favourable GI side effect profile[3].

This document outlines important considerations and a recommended approach to iron replacement therapy for patients who have not tolerated oral iron replacement with conventional supplements.

Indications for ferric maltol[4]

1. IDA confirmed with low haemoglobin and low serum ferritin/ transferrin saturations/ serum iron **AND EITHER**
2. Intolerance of at least 1 conventional oral iron preparations despite dose reduction **OR**
3. Persistent IDA after 3 months treatment with conventional oral iron supplements*

*There is no direct comparison between ferric maltol and conventional iron to say that maltol is more efficacious. Higher/ twice daily dosing may be better tolerated in maltol however, so clinicians may use their judgement in choosing ferric maltol over iv iron if they feel dosing or compliance may have contributed to a lack of complete response with conventional iron supplements.

Contraindications for ferric maltol[4]

1. No prior trial of conventional iron supplements
2. Iron overload/ haemochromatosis
3. Transfusion dependence/ repeated transfusions
4. Allergy or intolerance to ingredients (contains lactose, salt free)
5. Efficacy is untested for IBD patients with a Haemoglobin (Hb) of <9.5 g/L or those experiencing a moderate-severe flare.

Administration

30mg od po. To be taken on empty stomach (e.g. with half glass of water). Hb and ferritin levels would be expected to have normalised after 3 months of treatment.

Pharmacological interactions[4]

Oral calcium and magnesium salts may reduce absorption of ferric maltol. Recommended to separate administration by at least 2 hours.

Absorption of the following medications may be reduced by ferric maltol. Recommended to separate administration by at least 2 hours:

- Bisphosphonates
- Ciprofloxacin
- Entacapone
- Levofloxacin
- Levodopa
- Levothyroxine
- Moxifloxacin
- Mycophenolate
- Norfloxacin
- Penicillamine
- Ofloxacin

Avoid the use of the following medications alongside ferric maltol:

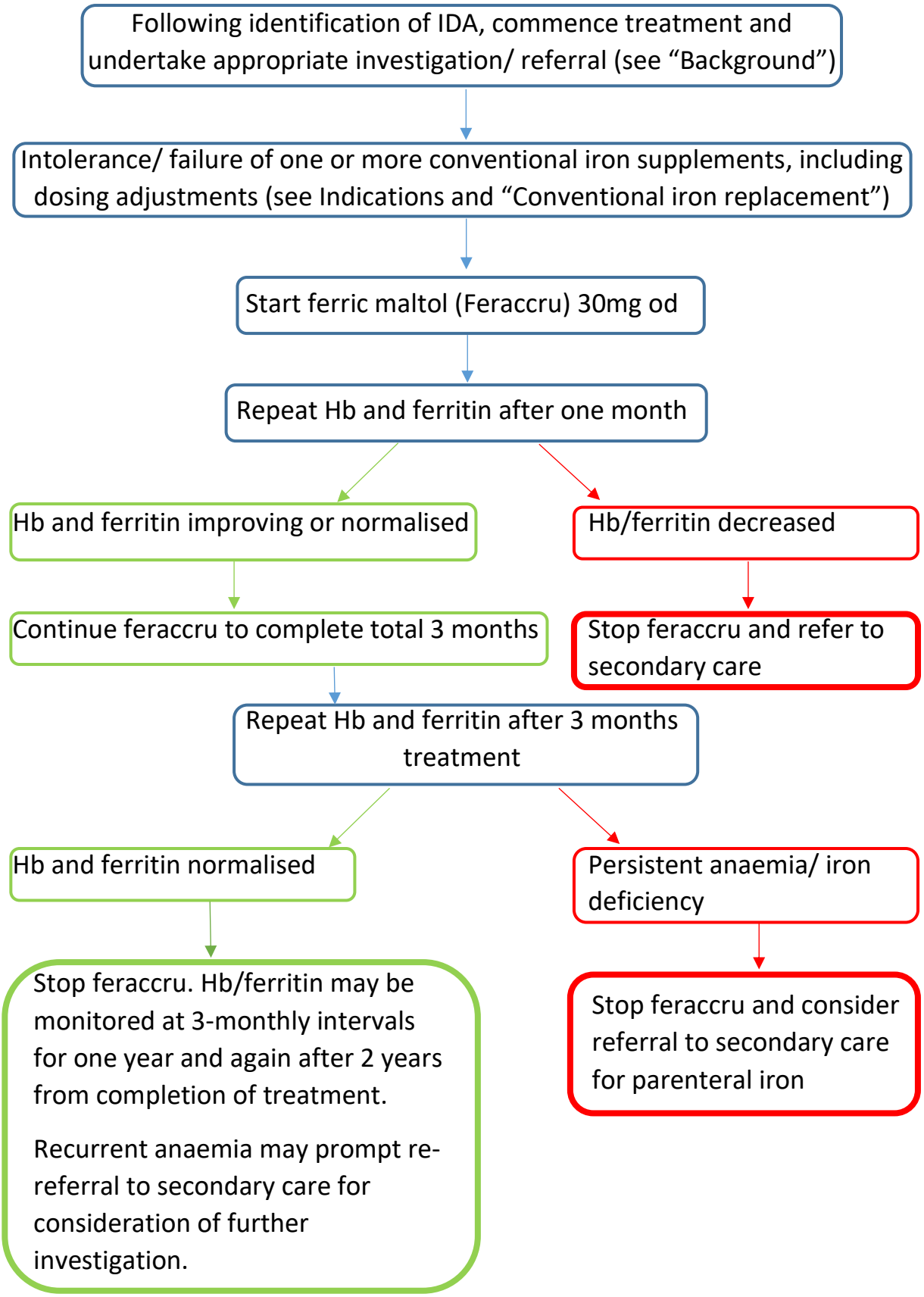
- iv iron- may lead to hypotension and collapse
- Methyldopa- may antagonise hypotensive effect of methyldopa
- Chloramphenicol (delays clearance of plasma iron, impairing erythropoiesis)
- Dimercaprol- nephrotoxic

Ferric maltol is safe in renal impairment, pregnancy and breast feeding.

Non-anaemic iron deficiency (NAID)

In the absence of an alternative cause for iron deficiency (malnutrition, malabsorption, blood transfusion, pre-menopausal women), or in the presence of significant clinical suspicion of gastrointestinal pathology, NAID may be treated similarly to IDA. Monitoring response is more difficult as this is usually based on the normalisation of haemoglobin, but 3 months of treatment may be considered a reasonable duration of treatment to replace iron stores.

Treatment algorithm



References

1. Tolkien Z, Stecher L, Mander AP et al (2015) Ferrous sulphate supplementation causes significant gastrointestinal side effects in adults: a systematic review and meta-analysis. *PLoS ONE* 2015; 10 e0117383
2. Snook J, Bhala N, Beales I et al (2021) British Society of Gastroenterology guidelines for the management of iron deficiency anaemia in adults. *Gut* 2021; 0:1-22
3. Schmidt C, Ahmad Z, Tulassay DC et al (2016) Ferric maltol therapy for iron deficiency anaemia in patients with inflammatory bowel disease: long-term extension data from a Phase 3 study. *Alimentary Pharmacology and Therapeutics* 2016 Vol 44(3) pp259-270
4. emc (2021) Accessed online [https://www.medicines.org.uk/emc/medicine/31722] Last updated Oct 2021.