crohn's colitis

Name of Clinical Care Pathway

Iron Deficiency

Objective

Monitor for and manage iron deficiency

Patient Population

Adult patients (>18 years) with a known diagnosis of inflammatory bowel disease

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PACE Inflammatory Bowel Disease Clinical Care Pathways

crohn's colitis

Highlight Box

Parenteral iron is recommended over oral iron. However, oral and parenteral iron effectively correct iron deficiency anemia. The decision of the optimal form of iron for each patient remains at the discretion of the prescriber, based on the patient's characteristics and needs.

These clinical decision support tools were developed by Canadian experts in IBD, based on their interpretation of current evidence and considerations specific to Canadian healthcare. International guidelines from Europe and the United States are available. However, these may reflect regional factors not directly applicable in Canada.

Introduction

This care protocol provides a general guideline for monitoring and managing iron deficiency in adults with inflammatory bowel disease. The availability of the listed options for iron replacement may vary across organizations.

IBD provider

1. Review complete blood count (hemoglobin [Hb], Mean corpuscular volume), iron, ferritin, transferrin, and total iron binding capacity.
2. Iron deficiency is diagnosed with ferritin <30 µg/L in the absence of active disease, or ferritin <100 µg/L with concurrent inflammation, and transferrin saturation (TSAT) <20%.
3. Review Hb
   - Hb <70 g/L: Consider urgent packed red blood cell (PRBC) transfusion if symptomatic and/or urgent iron infusion, and repeat Hb in 2 weeks.
   - Hb = 70-100g/L: Iron infusion and repeat Hb in 2 months.
   - Hb >100g/L: Oral iron supplements, if intolerant, organize iron infusion, repeat Hb, iron studies, c-reactive protein in 3 months.
   - If iron deficiency persists despite Hb>100 g/L, intravenous iron may still be considered in patients with anemia and ongoing symptoms or active disease.
   - Reassess disease activity if iron deficiency anemia recurs quickly after correction.
4. See table 1 for iron replacement options.
5. Arrange for intravenous (IV) iron replacement per protocol.
6. Inform the family physician of the plan for iron replacement.

Table 1: Options for iron replacement

Iron formulation*	Route	Common dose	Elemental iron equivalence
Ferrous gluconate	Oral	300mg/tablet	35mg
Ferrous sulfate	Oral	300mg/tablet	60mg
Ferrous fumarate	Oral	300mg/tablet	100mg
Iron polysaccharide (Feramax)	Oral	150mg/tablet	150mg
Heme iron polypeptide (Proferrin)	Oral	398mg/tablet	11mg
Ferric carboxymaltose (Injectafer)**	Intravenous	750-1000 mg/dose	50 mg/ml
Iron sucrose (Venofer)	Intravenous	Variable based on patient requirement (100-300mg/dose)	20mg/ml
Sodium ferric gluconate (Ferrlecit)	Intravenous	125mg	125mg
Ferric derisomaltose (Monoferric)	Intravenous	Variable based on patient requirement***	100mg/ml

Hb (g/L)	Weight <50 kg	Weight 50-70kg	Weight ≥70kg
≥ 100 g/L	500mg	1g	1.5g
< 100 g/L	500mg	1.5g	2g

Oral iron: Alternate-day oral iron dosing is recommended, especially with ferrous formulations.

Parenteral iron: Monitor for iron overload (ferritin >800–1000 µg/L or TSAT >50%) during IV iron therapy, particularly in patients receiving repeated courses

*This is not a comprehensive list of all iron products available.

**Ferric carboxymaltose (Injectafer) (FCM) is effective for rapid iron repletion in IBD patients with moderate to severe anemia. However, clinicians should be aware of the risk of persistent hypophosphatemia and, in rare cases, hypophosphatemic osteomalacia, particularly after repeated dosing. Monitoring serum phosphate, vitamin D, and markers of bone metabolism is advised in high-risk patients.

***Maximum single dose is 1.5g or 20mg/kg, whichever is less.

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