Iron Deficiency Anemia Treatment & Management

Approach Considerations

- Diagnosis
- Reason for the iron deficiency

- In most patients, the iron deficiency = oral iron therapy,
- .

- Underlying etiology should be corrected

- Avoid giving iron to patients who have a microcytic iron-overloading disorder (eg, thalassemia, sideroblastic anemia).

- Do not administer parenteral iron therapy to patients who should be treated with oral iron,

- Anaphylaxis may result

postmenopausal women

- Androgen deficiency
- Unresponsive to iron supplementation
- Danazol is a reasonable choice

Identify the etiology of the anemia

- History
- Physical exam
- Occult blood test
- Endoscopic examinations

Red blood cell transfusion

- Hospitalized patients with coronary heart disease, with :
- hemoglobin threshold lowered to 7-8 g/dL (recommendation: weak; quality of evidence: low)

- Erythropoiesis-stimulating agents are not recommended

- AND:
- congestive heart failure or coronary heart disease

Iron Therapy

ferrous iron salts

- Ferrous sulfate is the one most commonly used.

Traditional dosage of ferrous sulfate is 325 mg (65 mg of elemental iron) orally three times a day

lower doses (eg, 15-20 mg of elemental iron daily) may be as effective and cause fewer side effects

- Avoid tea and coffee and may take vitamin C (500 units) with the iron pill once daily

Moretti et al concluded

- Supplementation with 40-80 mg of iron taken every other day

Claims

- Other iron salts are absorbed better than ferrous sulfate and have less morbidity.

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Ferric citrate

- FDA :approval in November 2017 for treatment of iron deficiency anemia in adults with chronic kidney disease (CKD) who are not on dialysis.

carbonyl iron

- Greater safety for children who ingest their mothers' medication

ferric maltol

- Adults with inflammatory bowel disease (IBD).

- Oral ferric maltol to be noninferior to IV ferric carboxymaltose in patients with IBD.

Parenteral iron therapy

- Unable to absorb oral iron
- Increasing anemia despite adequate doses of oral iron.

- Parenteral iron has been used safely and effectively in patients with IBD (eg, ulcerative colitis, Crohn disease)

- in whom ferrous sulfate preparations may aggravate their intestinal inflammation.

- Ferric carboxymaltose injection (Injectafer)
- Ferric derisomaltose

Long-Term Monitoring

- The hemoglobin concentration increases by about 1 g/dL weekly until normal values are restored.

Parenteral iron

- Iron sucrose (VENOFER)

- Hemodialysis-dependent CKD: 100 mg elemental iron IV (injection or infusion over 2-5 min) per dialysis session not to exceed total cumulative dose of 1000 mg divided in 3 doses/week

IV Compatibilities

- Solution: 0.9% NaCl
- Dilute with up to 100 mL of 0.9% NaCl

IV Administration

- Undiluted: Administer by slow IV injection over 2-5 min
- Diluted solutions: Administer IV over 15 min

Ferric carboxymaltose

- INJECTAFER
- IV push: May administer undiluted at rate of 100 mg/minute
- IV infusion: Dilute dose in up to 250 mL 0.9% NaCl and infuse over at least 15 minutes

- Ferrous gluconate
- Ferrous fumarate
- Ferumoxytol