sodium ferric gluconate complex
(soe-dee-um ferr-ic gloo-kon-a-te)

Trade Name
Ferrlecit

Classification
Therapeutic: antianemics
Pharmacologic: iron supplements

Pregnancy Category B

Indications
Treatment of iron deficiency anemia in patients undergoing chronic hemodialysis who are concurrently receiving erythropoietin.

Action
An essential mineral found in hemoglobin, myoglobin, and many enzymes. Enters the bloodstream and is transported to the organs of the reticuloendothelial system (liver, spleen, bone marrow) where it becomes a part of iron stores. Therapeutic Effects: resolution or prevention of iron deficiency anemia.

Pharmacokinetics
Absorption:
Approximately 5–10% of dietary iron is absorbed (up to 30% in deficiency states). Absorption with IV administration is complete. Well absorbed following IM administration.

Distribution:
Remains in the body for many months. Crosses the placenta; enters breast milk.

Protein Binding:
90%.

Metabolism and Excretion:
Mostly recycled; small daily losses occurring via desquamation, sweat, urine, and bile.

Half-life:

TIME/ACTION PROFILE (effects on erythropoiesis)

<table>
<thead>
<tr>
<th>ROUTE</th>
<th>ONSET</th>
<th>PEAK</th>
<th>DURATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>IV</td>
<td>1–2 wk</td>
<td>2 wk</td>
<td>1–2 mo</td>
</tr>
</tbody>
</table>

Contraindications/Precautions

Contraindicated in:
- Anemia not due to iron deficiency
- Hemochromatosis, hemosiderosis, or other evidence of iron overload
- Hypersensitivity to sodium ferric gluconate complex in sucrose injection; contains benzyl alcohol

Use Cautiously in:
- Any evidence of tissue iron overload;
- Geri:
- OB:
- Lactation:
- Pedi:

Adverse Reactions/Side Effects

CNS:
dizziness, headache, syncope.

CV:
hypotension, hypertension, chest pain.

GI:
nausea, vomiting, diarrhea.

Derm:
flushing, urticaria.

Local:
pain or erythema at injection.

MS:
arthralgia, myalgia.

Misc:
allergic reactions including anaphylaxis, fever, lymphadenopathy.

Drug Interactions

Chloramphenicol and vitamin E may impair hematologic response to iron therapy.

Route/Dosage

IV (Adults): 10 mL (125 mg elemental iron) repeated during 8 sequential dialysis treatments to a total cumulative dose of 1 g.

IV (Children 6–15 yr): 0.12 mL/kg (1.5 mg/kg elemental iron) (should not exceed 125 mg/dose).

NURSING IMPLICATIONS

Assessment
- Assess nutritional status and dietary history to determine possible cause of anemia and need for patient teaching.
- Assess bowel function for constipation or diarrhea. Notify physician or other health care professional and use appropriate nursing measures should these occur.
- Monitor BP and heart rate frequently following IV administration until stable. Rapid infusion rate may cause hypotension and slowing.
- Monitor for signs and symptoms of anaphylaxis (rash, pruritus, laryngeal edema, wheezing) for at least 30 min following administration. No-
If health care professional immediately if these occur. Keep epinephrine and resuscitation equipment close by in the event of an anaphylactic reaction.

**Lab Test Considerations:** Monitor hemoglobin, hematocrit, and reticulocyte values prior to and every 3 wk during the first 2 mo of therapy and periodically thereafter. Serum ferritin and iron levels may also be monitored to assess effectiveness of therapy.

**Toxicity and Therapies:** Early symptoms of overdose include stomach pain, fever, nausea, vomiting (may contain blood), and diarrhea. Late symptoms include bluish lips, fingernails, and palms; drowsiness; weakness; tachycardia; seizures; metabolic acidosis; hepatic injury; and cardiovascular collapse. Patient may appear to recover prior to the onset of late symptoms. Therefore, hospitalization continues for 24 hr after patient becomes asymptomatic to monitor for delayed onset of shock or GI bleeding. Late complications of overdose include intestinal obstruction, pyloric stenosis, and gastric scarring.

If patient is comatose or seizing, gastric lavage with sodium bicarbonate is performed. Deferoxamine is the antidote. Additional supportive treatments to maintain fluid and electrolyte balance and correction of metabolic acidosis are also indicated.

**Potential Nursing Diagnoses**

**Activity intolerance (Indications)**

**Implementation**

- Discontinue oral iron preparations prior to parenteral administration.
- Ferrlecit is for IV use only.
- Before initiating therapeutic doses, a test dose of 2 mL (25 mg of elemental iron) should be administered. Dilute test dose in 50 mL of 0.9% NaCl and administer IV over 60 min.
- To administer therapeutic dose of 10 mL (125 mg of elemental iron) dilute in 100 mL of 0.9% NaCl. Dialysis patients frequently require a cumulative dose of 1 g of elemental iron, administered of over 8 sessions of sequential dialysis.
- **Rate:** Administer over 1 hr.

© 2015 F.A. Davis Company