**Rems**

**H**

**Eltrombopag (el-trom-bo-pag)**

**Presentation:** Tablets

**Classification:** Thrombopoietic

**Pharmacologic:** Thrombopoietin receptor agonist

**Pregnancy Category:** C

**Indications**

Treatment of chronic immune (idiopathic) thrombocytopenic purpura in patients who have had an inadequate response to corticosteroids, immunoglobulins or splenectomy (Abdolai et al) or in patients with an 7% risk of bleeding. Treatment of thrombocytopenia in patients with chronic hepatitis C to allow the initiation and maintenance of interferon-based therapy.

**Action**

Increases platelet production by initiating proliferation and differentiation of megakaryocytes from bone marrow progenitor cells. Therapeutic Effects: Increased platelet count with reduced risk of bleeding.

**Pharmacokinetics**

- **Absorption:** 52% absorbed following oral administration.
- **Distribution:** Unknown.
- **Protein Binding:** 99%.
- **Metabolism and Excretion:** Extensively metabolized; 59% eliminated in feces, 20% as unchanged drug; 31% excreted in urine as metabolites.
- **Half-life:** 21–35 hr.

**Time/Action Profile (Effect on Platelet Count)**

<table>
<thead>
<tr>
<th>Route</th>
<th>Onset</th>
<th>Peak</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>PO</td>
<td>1 wk</td>
<td>2 wk</td>
<td>1 wk</td>
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**Contraindications/Precautions**

- **Contraindicated in:** Lactation: Lactation.
- **Use Cautiously in:** Myelodysplastic syndromes (may increase risk of hematologic malignancy); Hepatic impairment (lower initial dose required); Patients of East Asian ancestry (may require lower doses); Geri: May be more sensitive to drug effects; **attice or hypoproteinemia:** in renal and hepatic function, concurrent disease states and drug therapy. **DM:** Use only when potential maternal benefit outweighs potential risk to fetus.

**Adverse Reactions/Side Effects**

- **EENT:** Development/worsening of cataracts.
- **CV:** Thromboembolism.
- **GI:** Hepatotoxicity.

**Interactions**

- **Drug-Drug:** Interactions with iron, calcium, aluminum, magnesium, selenium, and zinc by absorption; avoid concomitant use of medications containing these and other polyvalent cations.

**Route/Dosage**

**Chronic Immune (Idiopathic) Thrombocytopenia**

**PO (Adults):** 50 mg once daily, may be **qd** to achieve a platelet count of ≥50 x 10⁹/L (not to exceed 75 mg/day); Patients of East Asian ancestry—25 mg once daily initially, may be **qd** to achieve a platelet count of ≥50 x 10⁹/L (not to exceed 75 mg/day)

**Hepatic Impairment**

**Adults:** Mild, moderate, or severe hepatic impairment (Child-Pugh Class A, B, C)—25 mg once daily initially, may be **qd** to achieve a platelet count of ≥50 x 10⁹/L (not to exceed 75 mg/day).

**Chronic Hepatitis C-Associated Thrombocytopenia**

**PO (Adults):** 25 mg once daily; may be **qd** by 25 mg every 2 wk to achieve the target platelet count required to initiate antiviral therapy; during antiviral therapy, adjust dose to avoid ≥50 mg/day.

**Nursing Implications**

**Assessment**

- Monitor for unusual bleeding and bruising and signs of hepatotoxicity during therapy.

**Implementation**

- Monitor for unusual bleeding and bruising and signs of hepatotoxicity during therapy.

**Interactions**

- **Drug-Drug:** Interactions with iron, calcium, aluminum, magnesium, selenium, and zinc by absorption; avoid concomitant use of medications containing these and other polyvalent cations.
Monitor for signs and symptoms of cataracts. Perform baseline ocular examination prior to administration and periodically during therapy.

**Lab Test Considerations:**
- Weekly dose based on platelet count. If platelet count > 30 x 10^9/L following at least 2 wk of therapy, increase daily dose by 25 mg. If platelet count is 200 x 10^9/L to ≤ 400 x 10^9/L, decrease dose by 25 mg. Wait 2 wk to assess effects of dose adjustment. If platelet count > 400 x 10^9/L, stop eltrombopag, increase monitoring of platelets to 2x/wk. If platelet count is < 50 x 10^9/L, restart therapy at dose reduced by 25 mg. If platelet count is 200 x 10^9/L to < 400 x 10^9/L, decrease dose by 25 mg. Wait 2 wk to assess effects of dose adjustment. If platelet count is < 150 x 10^9/L, stop eltrombopag.
- Increase daily dose by 25 mg if platelet count is 400 x 10^9/L. If platelet count is 400 x 10^9/L after 2 wk of therapy at lowest dose, permanently discontinue eltrombopag. Discontinue therapy if platelet count is < 100 x 10^9/L and avoid clinically important bleeding after 2 wk of therapy at maximum daily dose of 75 mg.

**Monitor liver tests and CBC, including platelet counts and peripheral blood smear, prior to and throughout therapy.** Monitor AST, ALT, and serum bilirubin prior to therapy, every 2 wk during dose adjustment, and monthly following stable dose. If bilirubin is > 3 x upper limit of normal and is progressive, persistent for > 4 wk, or accompanied by direct bilirubin, or accompanied by clinical symptoms of liver injury or evidence of hepatic decompensation. Monitor CBC including platelet count, for at least 6 wk following discontinuation of therapy; may cause worsening thrombocytopenia.

**Potential Nursing Diagnoses**
- Risk for injury (Adverse Reactions)

**Implementation**
- **PO:** Administer on an empty stomach, 1 hr before or 2 hr after a meal. Allow at least 4 hr between eltrombopag and other medications (antacids), calcium-rich foods (dairy and calcium-fortified juices), and supplements containing iron, calcium, aluminum, magnesium, zinc, and selenium.

**Patient/Family Teaching**
- Explain purpose, risks, and benefits of therapy to patient. Risks or long term therapy are unknown.
- Instruct patient to avoid taking eltrombopag within 4 hr of foods, mineral supplements, and antacids containing iron, calcium, aluminum, magnesium, zinc, and selenium.
- Advise patients to avoid activities that may increase risk of bleeding.
- Instruct patient to notify health care professional if symptoms of liver problems (yellowing of skin or whites of eyes, unusual darkening of urine, unusual tiredness, pain in right upper stomach) occur.
- Advise female patients to notify health care professional promptly if pregnancy is planned or suspected or if breast feeding. A pregnancy registry has been established to collect information about eltrombopag effects during pregnancy. Enroll by calling 1-800-825-5249.
- Emphasize the importance of routine lab tests to determine effectiveness and monitor for side effects.

**Evaluation/Desired Outcomes**
- Increased platelet counts and decreased risk of bleeding. Platelet counts usually increase within 1–2 wk of starting and decrease within 1–2 wk of discontinuing therapy.

Why was this drug prescribed for your patient?