tiamterene (trye-am-ter-een)

**Classification**
Diuretics (potassium-sparing)

**Pregnancy Category C**

**Indications**

Indicated for potassium depletion caused by diuretics. Used with other agents to treat edema or hypertension.

**Action**

Inhibits sodium resorption in the kidney while saving potassium and hydrogen ions. Therapeutic Effects: Weak diuretic and antihypertensive response when compared with other diuretics. Conservation of potassium.

**Pharmacokinetics**

**Absorption:** 30–70% absorbed.

**Distribution:** Widely distributed.

**Metabolism and Excretion:** 80% metabolized by the liver, some excretion of unchanged drug.

**Half-life:** 1.7–2.5 hr.

**Therapeutic Effects:** Weak diuretic and antihypertensive response when compared with other diuretics. Conservation of potassium.

**Contraindications/Precautions**

- **Contraindicated in:** Hypersensitivity; Hyperkalemia; Concurrent use of potassium supplements or other potassium-sparing agents.
- **Use Cautiously in:** Hepatic dysfunction; Patients with diabetes mellitus (increased risk of hyperkalemia); Renal insufficiency; History of gout or kidney stones; Pregnancy, lactation, or children (safety not established).

**Adverse Reactions/Side Effects**

- CNS: Dizziness.
- CV: Arrhythmias.
- GI: Nausea, vomiting.
- GU: Erectile dysfunction, bluish urine, nephrolithiasis.
- Derm: Phototoxicity.

**Interactions**

**Drug-Drug:** Hypotension with acute ingestion of alcohol, other antihypertensive agents, or alcohol. Use with ACE inhibitors, indomethacin, angiotensin II receptor antagonists, potassium supplements, or enalapril in patients with heart failure or diabetes mellitus (risk of hyperkalemia). Lithium excretion. May increase the effects of folic acid (leucovorin should be used). May increase risk of toxicity from amantadine.

**Route/Dosage**

**PO (Adults):** 25–100 mg/day (not to exceed 300 mg/day).

**PO (Children):** 2–4 mg/kg/day (120 mg/m²/day) in divided doses given daily or every other day (not to exceed 6 mg/kg/day or 300 mg/day).

**NURSING IMPLICATIONS**

**Assessment**

- Monitor intake and output ratios and daily weight during therapy.
- If medication is given as an adjunct to antihypertensive therapy, BP should be evaluated before administration.
- Monitor response of signs and symptoms of hyperkalemia (weakness, fatigue, ECG changes, arrhythmias, polyuria, polydipsia). Assess patient frequently for development of hyperkalemia (fatigue, muscle weakness, pericardial friction, dyspnea, cardiac arrest). Patients with diabetes mellitus or kidney disease and elderly patients are at increased risk of developing these symptoms.
- Potassium levels may be considered in patients receiving prolonged therapy.
- Lab Test Considerations: Evaluate serum potassium levels prior to and routinely during therapy. May cause increase in serum magnesium, uric acid, BUN, creatinine, potassium, and urinary calcium excretion levels. May also cause sodium levels.
- Discontinue potassium-sparing diuretics 3 days prior to a glucose tolerance test because of risk of severe hyperkalemia.

**NURSE-FACEDICATION:**

- **Injection:** Leucovorin should be used. May increase risk of toxicity from amantadine.
- **Oral:** Do not exceed 300 mg/day. May increase risk of toxicity from amantadine.
Monitor platelet count and total and differential leukocyte count prior to and periodically during therapy in patients taking triamterene.

**Potential Nursing Diagnoses**

**Excess fluid volume (Indications)**

**Implementation**

- PO: Emphasize importance of taking medication to avoid blood pressure spikes. Administer in AM to avoid disrupting sleep pattern for urination.
- Triamterene capsules may be opened and contents mixed with food or fluids for patients with difficulty swallowing.

**Patient/Family Teaching**

- Emphasize importance of continuing to take this medication, even if feeling well. Instruct patient to take medication at the same time each day. Take missed doses as soon as remembered unless almost time for next dose. Do not double doses.
- Caution patient to avoid salt substitutes and foods that contain high levels of potassium or sodium unless prescribed by health care professional.
- May cause dizziness. Caution patient to avoid driving or other activities requiring alertness until response to medication is known.
- Advise patients taking triamterene to use sunscreen and protective clothing to prevent photosensitivity reactions.
- Instruct patient to notify health care professional of medication regimen prior to treatment or surgery.
- Instruct patient to notify health care professional if muscle weakness or cramps, fatigue, or severe nausea, vomiting, or diarrhea occurs.
- Emphasize the need for follow-up eye exams to monitor progression.
- Hypertension: Reinforce need to continue additional therapies for hypertension (weight loss, reduced sodium intake, stress reduction, moderation of alcohol intake, regular exercise, and cessation of smoking). Medication helps control but does not cure hypertension.
- Teach patient and family the correct technique for checking BP weekly.

**Evaluation/Desired Outcomes**

- Increase in diuresis and decrease in edema while maintaining appropriate serum potassium level.
- Decrease in BP.
- Prevention of hypokalemia in patients taking triamterene.

Why was this drug prescribed for your patient?