chlorthalidone (klor-thal-i-don)

**Indications**
Management of mild to moderate hypertension. Treatment of edema associated with HF, Renal dysfunction, Cirrhosis, Glucocorticoid therapy, Estrogen therapy.

**Action**
Increases excretion of sodium and water by inhibiting sodium reabsorption in the distal tubule. Promotes excretion of chloride, potassium, magnesium, and bicarbonate. May produce arteriolar dilation.

**Therapeutic Effects:**
Lowering of BP in hypertensive patients and diuresis with mobilization of edema.

**Pharmacokinetics**

- **Absorption:** Rapidly absorbed after administration.
- **Distribution:** Distributed into extracellular space; crosses the placenta and enters breast milk.
- **Metabolism and Excretion:** Excreted mainly unchanged by the kidneys.
- **Half-life:** 35–50 hr.

**Contraindications/Precautions**
Contraindicated in:
- Hypersensitivity (cross-sensitivity with other thiazides or sulfonamides may exist); Some products contain tartrazine and should be avoided in patients with known intolerance; Anuria.
- Lactation: Lactation.

**Use Cautiously in:**
- Renal or hepatic impairment;
- OB: May cause jaundice or thrombocytopenia in newborn.

**Adverse Reactions/Side Effects**

- **CNS:** Dizziness, drowsiness, lethargy, weakness.
- **CV:** Hypotension.
- **GI:** Anorexia, cramping, hepatitis, nausea, vomiting.
- **Derm:** Photosensitivity, rash.
- **Endo:** Hyperglycemia.
- **F and E:** Hyperkalemia, dehydration, hypercalcemia, hypochloremic alkalosis, hypokalemia, hypercalcemia, hyperkalemia, Hct.
- **Blood dyscrasias.

**Interactions**

- **Drug-Drug:** Additive hypotension with other antihypertensive agents, acute ingestion of alcohol containing.
- **Herbal:** Additive hypotension with curcuma, anethole, peppermint, or licorice.
- **Herb:** The excretion of lithium.
- **Food:** None.
- **Lab Test:** May affect urinary glucose in diabetic patients.

**Route/Dosage**
When used as a diuretic in adults, generally given daily, but may be given every other day or 2–3 times/week.

- **PO (Adults):** 12.5–100 mg once daily (doses above 25 mg are associated with greater likelihood of electrolyte abnormalities).

**NURSING IMPLICATIONS**

- **Assessment**
  - Monitor BP, intake, output, and daily weight and assess feet, legs, and sacral area for edema daily.
  - Assess patient, especially if taking digitalis glycosides, for anorexia, nausea, vomiting, muscle cramps, paresthesia, and confusion. Notify physician or other health care professional if these signs of electrolyte imbalance occur. Patients taking digitalis glycosides are at risk of digitalis toxicity as a result of the potassium-depleting effect of the diuretic.
  - Monitor patient for allergy to sulfonamides.
  - Hypertension: Monitor BP before and periodically throughout therapy.
  - Monitor frequency of prescription refills to determine compliance.
  - Lab Test Considerations: Monitor electrolytes (especially potassium), blood glucose, BUN, serum creatinine, and serum acid levels before and periodically throughout therapy.
  - Use cautiously in: In women and women glucose in diabetic patients.
May cause:
- Increased serum levels of sodium, potassium, and chloride, and decreased serum levels of magnesium, calcium, creatinine, and uric acid.
- Increased serum levels of cholesterol, low-density lipoprotein, and triglycerides.

Potential Nursing Diagnoses
- Excess fluid volume (indications)
- Risk for deficient fluid volume (side effects)

Implementation
- Administer in the morning to prevent disruption of sleep cycle for urination.
- Intermittent dose schedules may be used for continued control of edema.
- PO: May give with food or milk to minimize GI irritation. Tablets may be crushed and mixed with fluids for facilitation swallowing.

Patient/Family Teaching
- Instruct patient to take this medication at the same time each day. If a dose is missed, take as soon as remembered but not just before next dose is due. Do not double doses.
- Instruct patient to monitor weight biweekly and notify health care professional of significant changes.
- Caution patient to change positions slowly to minimize orthostatic hypotension. This may be potentiated by alcohol.
- Advise patient to use sunscreen and protective clothing to prevent photosensitivity reactions.
- Instruct patient to discuss dietary potassium requirements with health care professional.
- Advise patient to notify health care professional of medication regimen before treatment or surgery.
- Advise patient to report muscle weakness, cramps, nausea, vomiting, diarrhea, or dizziness to health care professional.
- Emphasize the importance of routine follow-up exams.
- Hypertension: Advise patient to continue taking the medication even if feeling better. Medication controls but does not cure hypertension.
- Encourage patient to comply with additional interventions for hypertension (weight reduction, low-sodium diet, regular exercise, smoking cessation, moderation of alcohol consumption, and stress management).

Evaluation/Desired Outcomes
- Decrease in BP
- Decrease in edema.

Why was this drug prescribed for your patient?