metolazone (me-tole-a-zone)

Zaroxolyn

Classification
Therapeutic: antihypertensives, diuretics
Pharmacologic: thiazide-like diuretics

Pregnancy Category B

Indications
Mild to moderate hypertension. Edema associated with HF or the nephrotic syndrome.

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. Diuresis with subsequent mobilization of edema. Effect may continue in renal impairment.

Pharmacokinetics
Absorption: Absorption is variable.
Distribution: Unknown.
Protein Binding: 95%.
Metabolism and Excretion: Excreted mainly unchanged by the kidneys.
Half-life: 6–20 hr.

TIME/ACTION PROFILE (diuretic effect†)

<table>
<thead>
<tr>
<th>ROUTE</th>
<th>ONSET</th>
<th>PEAK</th>
<th>DURATION</th>
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<tbody>
<tr>
<td>PO</td>
<td>1 hr</td>
<td>2 hr</td>
<td>12–24 hr</td>
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†Full antihypertensive effect may take days–weeks

Contraindications/Precautions
Contraindicated in: Hypersensitivity; Cross-sensitivity with other sulfonamides may exist; Anuria; Lactation.

Use Cautiously in: Severe hepatic impairment; OB: Safety not established; Geri: q sensitivity to drug effects.

Adverse Reactions/Side Effects

Interactions
Drug-Drug: ↑ risk of hypotension with nitrates, acute ingestion of alcohol, or other antihypertensives. ↑ risk of hypokalemia with corticosteroids, amphotericin B, piperacillin, ticarcillin. May ↓ the risk of digoxin toxicity. ↓ the excretion of lithium, may cause toxicity. May ↓ the effectiveness of methenamine. Nonsteroidal anti-inflammatory drugs may ↑ risk of gastrointestinal toxicity. May ↓ the excretion of lithium; may cause toxicity. May ↓ the effectiveness of methenamine. Stimulant laxatives (including aloe, senna) may ↓ risk of potassium depletion.

Drug-Food: Food may ↓ extent of absorption.

Route/Dosage
PO (Adults): Hypertension—2.5–5 mg/day; edema—5–20 mg/day.
PO (Children): 0.2–0.4 mg/kg/day divided q 12–24 hr.

NURSING IMPLICATIONS
Assessment
- Monitor BP, intake and output, and daily weight, and assess feet, legs, and sacral area for edema daily.
- Assess patient, especially if taking digoxin, for anorexia, nausea, vomiting, muscle cramps, paresthesia, and confusion. Notify health care professional if these signs of electrolyte imbalance occur. Patients taking digoxin are at risk of digoxin toxicity because of the potassium-depleting effect of the diuretic.
- Assess patient for allergy to sulfonamides.
- Hypertension: Monitor BP before and periodically during therapy.
- Monitor frequency of prescription refills to determine compliance.
- Lab Test Considerations: Monitor electrolytes (especially potassium), blood glucose, HbA1c, and serum creatinine and urea levels before and periodically during therapy.
- May cause ↑ in serum and urine glucose in diabetic patients.
- May cause ↑ in serum magnesium, potassium, and sodium and urinary calcium concentrations.

Nursing Considerations
- Familiarize patient and family with need for lifelong therapy. Emphasize that full blood pressure response may be delayed 2–3 weeks.

Patient/Family Teaching
- Instruct patient to take medication as directed. May take with food or milk if GI irritation occurs. Take at same time each day.
- Instruct patient to report unusual bleeding, bruising, or weakness.
- Advise patient to notify health care professional if得不到: hypotension, palpitations, photophobia, rash, or unusual vision.
- Instruct patient to notify health care professional of all Rx or OTC medications, vitamins, or herbal products being taken.
- Instruct patient to carry identification that lists diagnosis and medication therapy.
- Caution patient to avoid driving and potentially hazardous activities until response to therapy is known.
- Caution patient to use sunscreen and protective clothing to prevent sunburn.

Evaluation/Desired Outcomes
- Control of BPH with maintenance of normal sodium excretion.
- Decrease in blood pressure.
- Resolution of edema.
May cause serum protein-bound iodine (PBI) concentrations.

May cause serum cholesterol, low-density lipoprotein, and triglyceride concentrations.

Potential Nursing Diagnoses
Excess fluid volume (Indications)
Risk for deficient fluid volume (Side Effects)

Implementation
Do not confuse metolazone with methimazole.

Administration: Administer in the morning to prevent disruption of sleep cycle.

Intermittent dose schedule may be used for continued control of edema.

PO: May give with food or milk to minimize GI irritation.

Patient/Family Teaching
Instruct patient to take metolazone at the same time each day. Take missed doses as soon as remembered but not just before next dose. 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; may be potentiated by alcohol.

Advise patient to use sunscreen and protective clothing in the sun to prevent photosensitivity reactions.

Instruct patient to discuss dietary potassium requirements with health care professional.

Instruct patient to notify health care professional of medication regimen before treatment or surgery.

Advise patient to use sunscreen and protective clothing in the sun to prevent photosensitivity reactions.

Instruct patient to discuss dietary potassium requirements with health care professional.

Instruct patient and family in correct technique for monitoring weekly BP.

Advise patient to consult with health care professional before taking other medications, especially cough or cold preparations, concurrently with this therapy.

Evaluation/Desired Outcomes
Decrease in BP.

Increase in urine output.

Decrease in edema.

Why was this drug prescribed for your patient?

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).