biperiden (by-per-e-den)

Classification
Therapeutic: antiparkinson agents
Pharmacologic: anticholinergics

Pregnancy Category C

Indications
Adjunctive treatment of all forms of Parkinson's disease, including drug-induced extrapyramidal effects and acute dystonic reactions.

Action
Blocks cholinergic activity in the CNS, which is partially responsible for the symptoms of Parkinson's disease. Restores the natural balance of neurotransmitters in the CNS.

Therapeutic Effects:
Reduction of rigidity and tremors.

Pharmacokinetics
Absorption: Well absorbed after oral or IM administration.
Distribution: Unknown.
Metabolism and Excretion: Unknown.
Half-life: Unknown.

TIME/ACTION PROFILE (relief of symptoms)

<table>
<thead>
<tr>
<th>ROUTE</th>
<th>ONSET</th>
<th>PEAK</th>
<th>DURATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>PO</td>
<td>unknown</td>
<td>unknown</td>
<td>unknown</td>
</tr>
<tr>
<td>IM</td>
<td>10–30 min</td>
<td>unknown</td>
<td>unknown</td>
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<tr>
<td>IV</td>
<td>unknown</td>
<td>unknown</td>
<td>1–8 hr</td>
</tr>
</tbody>
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Contraindications/Precautions
Contraindicated in: Hypersensitivity; Angle-closure glaucoma; Bowel obstruction; Megacolon; Tardive dyskinesia.

Use Cautiously in: Prostatic enlargement; Seizure disorders; Cardiac arrhythmias; OB, Lactation: Safety not established; Geri: Increased risk of adverse reactions; lower doses may be necessary.

Adverse Reactions/Side Effects

Interactions
Drug-Drug: Additive anticholinergic effects with drugs sharing anticholinergic properties, such as antihistamines, phenothiazines, quinidine, disopyramide, and tricyclic antidepressants. Counteracts the cholinergic effects of bethanechol. Antacids or antidiarrheals may decrease absorption.

Drug-Natural Products: Anticholinergic effects with angel's trumpet and jimson weed, and scopolia.

Route/Dosage
Parkinsonism
PO (Adults): 2 mg 3–4 times daily initially (not to exceed 16 mg/day).

Extrapyramidal Reactions
PO (Adults): 2 mg 1–3 times daily.
IM, IV (Adults): 2 mg, may repeat q 30 min (not to exceed 8 mg or 4 doses/24 hr).
IM (Children): 40 mcg (0.04 mg)/kg or 1.2 mg/m², may repeat q 30 min (not to exceed 4 doses/24 hr).

NURSING IMPLICATIONS

Assessment
● Assess parkinsonian and extrapyramidal symptoms (restlessness or desire to keep moving, rigidity, tremors, pill rolling, mask-like face, shuffling gait, muscle spasms, twisting motions, difficulty speaking or swallowing, loss of balance control) before and throughout therapy.
● Assess bowel function daily. Monitor for constipation, abdominal pain, distention, or the absence of bowel sounds.
● Monitor intake and output ratios and assess patient for urinary retention (dysuria, diminished bladder, infrequent voiding of small amounts, overflow incontinence).
● Assess blood pressure daily. Monitor for congestive heart failure, fluid retention, or the absence of blood pressure sounds.
● After parenteral administration, monitor pulse and BP closely and maintain bed rest for 1 hr. Advise patients to change positions slowly to minimize orthostatic hypotension.

Nursing Considerations
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Patients with mental illness are at risk of developing exaggerated symptoms of their disorder during early therapy with this medication. Withhold drug and notify health care professional if significant behavioral changes occur.

Potential Nursing Diagnoses

Impaired physical mobility (Indications)

IV Administration

Direct IV:

Rate: Administer each dose over at least 1 min to minimize hypotension and mild bradycardia.

Patient/Family Teaching

Advise patient to take medication exactly as directed. Take missed doses as soon as possible, up to 2 hr before the next dose. Drug should be tapered gradually when discontinuing or a withdrawal reaction may occur (anxiety, tachycardia, insomnia, return of parkinsonian or extrapyramidal symptoms).

May cause dizziness, drowsiness, or blurred vision. Advise patient to avoid driving or other activities that require alertness until response to the drug is known.

Caution patient to change positions slowly to minimize orthostatic hypotension.

Advise patient that bowel movements increase, good oral hygiene, and sugarless gum or candy may decrease dry mouth. Patients should notify health care professional if dry mouth interferes with use of dentures.

Instruct patient to notify health care professional if difficulty with urination, constipation, abdominal discomfort, rapid or pounding heartbeat, confusion, eye pain, or rash occurs.

Advise patient to confer with health care professional before taking Rx, OTC, or herbal products, especially cold remedies, or drinking alcoholic beverages.

Caution patient that this medication decreases perspiration. Overheating may occur during hot weather. Patients should notify health care professional if they cannot remain indoors in an air-conditioned environment during hot weather.

Advise patient to avoid antacids or antidiarrheals within 1–2 hr of this medication.

Advise patient to notify health care professional if withdrawal reaction occurs (anxiety, tachycardia, insomnia, return of parkinsonian or extrapyramidal symptoms).

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Advise patient in asymptomatic or unilateral edema within 1–2 hr of this medication.

Emphasize the importance of routine follow-up exams.

Evaluation/Desired Outcomes

Decrease in tremors and rigidity and an improvement in gait and balance in Parkinson’s disease.

Resolution of drug-induced extrapyramidal reactions.

Why was this drug prescribed for your patient?