diphenoxylate/atropine (dye-fen-ox-late/at-roe-peen)
Lomotil, Lonox
difenoxin/atropine (dye-fen-ox-in/at-roe-peen)
Motofen

Classification
Therapeutic: antidiarrheals
Pharmacologic: anticholinergics

Schedule V (diphenoxylate/atropine)
IV (difenoxin/atropine)

Pregnancy Category C

Indications
Adjunctive therapy in the treatment of diarrhea.

Action
Inhibits excess GI motility. Structurally related to opioid analgesics but has no analgesic properties. Atropine added to discourage abuse. Therapeutic Effects: Decreased GI motility with subsequent decrease in diarrhea.

Pharmacokinetics
Absorption: Well absorbed from the GI tract.
Distribution: Enters breast milk.
Metabolism and Excretion: Diphenoxylate—mostly metabolized by the liver with some conversion to an active antidiarrheal compound (difenoxin). Difenoxin—metabolized by the liver. Minimal excretion in urine.
Half-life: Diphenoxylate—2.5 hr; difenoxin—4.5 hr.

TIME/ACTION PROFILE (antidiarrheal action)

<table>
<thead>
<tr>
<th>ROUTE</th>
<th>ONSET</th>
<th>PEAK</th>
<th>DURATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>PO</td>
<td>45–60 min</td>
<td>2 hr</td>
<td>3–4 hr</td>
</tr>
</tbody>
</table>

Contraindications/Precautions
Contraindicated in: Hypersensitivity; Severe liver disease; Infectious diarrhea; Diarrhea associated with pseudomembranous colitis; Children <2 yr; Known alcohol intolerance (some liquid diphenoxylate/atropine products only).

Use Cautiously in: Patients physically dependent on opioids; Inflammatory bowel disease; Geriatric patients (more sensitive to effects); Children (more sensitive to effects, especially during recovery period); Prostatic hypertrophy; Pregnancy; lactation, or children <12 yr (safety not established for difenoxin/atropine in children <12 yr; diphenoxylate/atropine should not be used in children <2 yr).

Adverse Reactions/Side Effects

Interactions
Drug-Drug: Additive CNS depression with other CNS depressants including alcohol, antihistamines, opioid analgesics, and sedative/hypnotics. Additive anticholinergic properties with other drugs having anticholinergic properties, including tricyclic antidepressants and disopyramide. Use with MAO inhibitors may result in hypertensive crises.

Drug-Natural Products: Increased anticholinergic effects with angel’s trumpet, jimson weed, and scopolia.

Route/Dosage
Difenoxin/Atropine
Doses given are in terms of difenoxin—each tablet contains 1 mg difenoxin with 0.025 mg of atropine.
PO (Adults): 2 tablets initially, then 1 tablet after each loose stool or every 3–4 hr as needed (not to exceed 8 tablets/day).

Diphenoxylate/Atropine
Adult doses given are in terms of diphenoxylate—each tablet contains 2.5 mg diphenoxylate with 0.025 mg of atropine; adult doses are given in mg of diphenoxylate and mL of diphenoxylate/atropine liquid; each 5 mL of liquid contains 2.5 mg diphenoxylate with 0.025 mg of atropine.
PO (Adults): 5 mg; 3–4 times daily initially, then 5 mg once daily as needed (not to exceed 20 mg/day).
PO (Children): use liquid only—0.5–0.6 mg/kg/day in 4 divided doses.

Concomitant use of diphenoxylate/ atropine may result in more frequent and prolonged anticholinergic effects.
NURSING IMPLICATIONS

Assessment

- Assess the frequency and consistency of stools and bowel sounds prior to and throughout therapy.
- Assess patient’s fluid and electrolyte balance and skin turgor for dehydration.
- Lab Test Considerations: Liver function tests should be evaluated periodically during prolonged therapy.
- Diphenoxylate/atropine may cause increased serum amylase concentrations.

Potential Nursing Diagnoses

Diarrhea (Indications)
Constipation (Side Effects)

Implementation

- Risk of dependence increases with high-dose, long-term use. Atropine has been added to discourage abuse.
- PO: Diphenoxylate/atropine tablets may be administered with food if GI irritation occurs. Tablets may be crushed and administered with patient’s fluid of choice. Use calibrated measuring device for liquid preparations.

Patient/Family Teaching

- Instruct patient to take medication as directed. Do not take more than the prescribed amount because of the habit-forming potential and risk of overdose in children. If a scheduled dosing regimen, missed doses should be taken as soon as possible unless almost time for next dose. Do not double doses.
- Medications may cause drowsiness. Advise patient to avoid driving or other activities requiring alertness until response to drug is known.
- Advise patient that frequent mouth rinses, good oral hygiene, and sugarless gum or candy may relieve dry mouth.
- Caution patient to avoid alcohol and other CNS depressants concurrently with this medication.
- Advise patient to inform health care professional of medication regimen prior to treatment or surgery.
- Instruct patient to notify health care professional if diarrhea persists or if fever, abdominal pain, or palpitations occur.

Evaluation/Desired Outcomes

- Decrease in diarrhea. Treatment of acute diarrhea should be continued for 24–36 hr before it is considered ineffective.

Why was this drug prescribed for your patient?