**Galantamine** (gal-ant-a-meen)

**Synonyms:** Razadyne, Razadyne ER, Reminyl ER

**Classification:** Anti-Alzheimer's agents

**Pharmacologic Class:** Cholinergics (cholinesterase inhibitors)

**Pregnancy Category:** B

**Indications**

Mild to moderate dementia/neurocognitive disorder of the Alzheimer's type.

**Action**

Enhances cholinergic function by reversible inhibition of cholinesterase.

**Therapeutic Effects:** Decreased dementia/cognitive decline (temporary) associated with Alzheimer's disease. Cognitive enhancer.

**Pharmacokinetics**

**Absorption:** Well absorbed (90%) following oral administration.

**Distribution:** Unknown.

**Metabolism and Excretion:** Mostly metabolized by the liver (primarily by CYP2D6 and CYP3A4 isoenzymes; the CYP2D6 enzyme system exhibits genetic polymorphism; 7% of population may be poor metabolizers (PMs) and may have significantly reduced galantamine concentrations and an increased risk of adverse effects). 20% excreted unchanged in urine.

**Half-life:** 7 hr.

**TIME/ACTION PROFILE (anticholinesterase activity)**

<table>
<thead>
<tr>
<th>ROUTE</th>
<th>ONSET</th>
<th>PEAK</th>
<th>DURATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>PO</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PO-ER</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Contraindications/Precautions**

**Contraindicated in:** Hypersensitivity; Severe hepatic or renal impairment; Lactation: Children or lactation.

**Use Cautiously in:** Patients with supraventricular cardiac conduction defects or concurrent use of drugs that may slow heart rate; GI bleeding/concerns; NSAID use; Severe asthma or obstructive pulmonary disease; Mild to moderate renal impairment (avoid use if GFR < 60 mL/min); Mild to moderate hepatic impairment (caution dose titration recommended). May 7% risk of cardiovascular mortality; OB: Use only if potential benefit outweighs potential risks in mother.

**Adverse Reactions/Side Effects**

**CNS:** Fatigue, dizziness, headache, syncope.

**CV:** Bradycardia, chest pain.

**GI:** Anorexia, diarrhea, dyspepsia, flatulence, nausea, vomiting.

**GU:** Bladder outlet obstruction, incontinence.

**Neuro:** Tremor.

**Misc:** Weight loss.

**Interactions**

**Drug-Drug:** Will neuromuscular blockade from succinylcholine-type neuromuscular blocking agents. May effects of other cholinesterase inhibitors or other cholinergic agonists, including bethanechol. May effectiveness of anti-cholinergic medications. Blood levels and effects may be increased by ketoconazole, paroxetine, amitriptyline, bupropion, or quinidine.

**Route/Dosage**

**PO (Adults):**

- Immediate-release tablets—4 mg twice daily initially, dose increments of 4 mg should be made at 4 wk intervals, up to 12 mg twice daily. Doses up to 15 mg twice daily have been used (range 10–32 mg/day).
- Extended-release capsules—8 mg/day as a single dose in the morning, may be titrated up to 24 mg/day after 4 wk, then up to 24 mg/day after wk, increments based on benefit/tolerability.

**Renal Impairment**

**PO (Adults):**

- Moderate renal impairment—Daily dose should not exceed 16 mg.

**Hepatic Impairment**

**PO (Adults):**

- Moderate hepatic impairment—Daily dose should not exceed 16 mg.

**NURSING IMPLICATIONS**

**Assessment**

- Assess cognitive function (memory, attention, reasoning, language, ability to perform simple tasks) periodically during therapy.
- Monitor heart rate periodically during therapy. May cause bradycardia.

**Potential Nursing Diagnoses**

- Disturbed thought process (Indications)
- Risk for injury (Indications)
- Impaired environmental interpretation syndrome (Indications)

**Client Education**

- Continue drug name.
- Genetic Implication. CAPI TALS indicate life-threatening, underlines indicate most frequent. Strikethrough indicates discontinued.
Implementation

- Do not confuse Razadyne with Rozerem (ramelteon).
- Patients should be maintained on a stable dose for a minimum of 4 weeks prior to increasing dose.
- If dose has been interrupted for several days or longer, restart at the lowest dose and escalate to the current dose.
- PO: Administer twice daily, preferably with morning and evening meal. Administration with food, the use of antiemetic medications, and ensuring adequate fluid intake may decrease nausea and vomiting.
- Administer extended-release capsules in the morning, preferably with food. Swallow whole; do not open, crush, or chew.
- Use pipette provided with oral solution to administer accurate amount.

Patient/Family Teaching

- Emphasize the importance of taking galantamine daily, as directed. Instruct patient and/or caregiver in correct use of pipette if using oral solution. Skip missed doses and return to regular schedule the following day. Do not double doses. Do not discontinue abruptly, although no increase in frequency of adverse events may occur, beneficial effects of galantamine are lost when the drug is discontinued.
- Caution patient and caregiver that galantamine may cause dizziness.
- Instruct patient to maintain adequate fluid intake during therapy.
- Advise patient and caregiver to notify health care professional if nausea or vomiting persists beyond 7 days or if new symptoms occur or previously noted symptoms increase in severity.
- Advise patient and caregiver to notify health care professional of medication regimen prior to treatment or surgery.
- Emphasize the importance of follow-up exams to monitor progress.
- Teach patient and caregiver that improvements in cognitive functioning may take weeks to months to stabilize.
- Caution that disease is not cured and degenerative process is not reversed.

Evaluation/Desired Outcomes

- Improvement in cognitive function (memory, attention, reasoning, language, ability to perform simple tasks) in patients with Alzheimer’s disease.

Why was this drug prescribed for your patient?