memantine (me-man-teen)

Classifications
- Therapeutic: anti-Alzheimer’s agents
- Pharmacologic: N-methyl-D-aspartate antagonist

Pregnancy Category B

Indications
Moderate to severe dementia/neurocognitive disorder associated with Alzheimer’s disease.

Action

Pharmacokinetics
- Absorption: Well absorbed after oral administration.
- Distribution: Unknown.
- Metabolism and Excretion: 57–82% excreted unchanged in urine by active tubular secretion moderated by pH dependent tubular reabsorption. Remainder metabolized; metabolites are not pharmacologically active.
- Half-life: 60–80 hr.

TIME/ACTION PROFILE (blood levels)

<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>3–7 hr</td>
<td>12 hr</td>
</tr>
<tr>
<td>PO-ER</td>
<td>unknown</td>
<td>9–12 hr</td>
<td>24 hr</td>
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</tbody>
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Contraindications/Precautions
- Contraindicated in: Hypersensitivity.
- Use Cautionally in: Severe renal impairment (Clcr); Concurrent use of other NMDA antagonists (aminoglycosides, rituximab, ketamine, dextromethorphan); Concomitant use of drugs or doses that cause alkaline urine; Conditions that alter pH urine including severe urinary tract infections or renal tubular acidosis. (Lead to increased and/or urine pH levels)

Adverse Reactions/Side Effects

Interactions
- Drug-Drug: Medications that alkalize urine or increase urine pH (e.g. carbonic anhydrase inhibitors, sodium bicarbonate) may increase and/or urine pH levels.

Route/Dosage
- PO (Adults): Immediate-release—5 mg once daily initially, then 5 mg/week, up to 20 mg/day (5 mg twice daily); then 10 mg/week, up to 30 mg/day (5 mg twice daily) or 15 mg/week, up to 45 mg/day (5 mg twice daily); Extended-release—7 mg daily initially by 7 mg/week to target dose of 28 mg once daily.
- Renal Impairment (Adults): CCr 5–29 mL/min—Immediate-release: Target dose is 10 mg/day (5 mg twice daily); Extended-release: Target dose is 14 mg once daily.

NURSING IMPLICATIONS
- Assessment
  - Monitor cognitive function (memory, attention, reasoning, language, ability to perform simple tasks) periodically during therapy.
  - Lab Test Considerations: May cause anemia.

Potential Nursing Diagnoses
- Disturbed thought processes (Indications)
- Risk for injury (Side Effects)

Impaired environmental interaction syndrome

Implementation
- Dose increases should occur no more frequently than weekly.
- To switch from Namenda to Namenda XR, patients taking 10 mg twice daily of Namenda tablets may be switched to Namenda XR 28 mg once daily capsules the day following the last dose of a 10 mg Namenda tablet. Patients with renal impairment

- Current use of drugs or doses that cause alkaline urine; Conditions that alter pH urine including severe urinary tract infections or renal tubular acidosis. (Lead to increased and/or urine pH levels)
may use the same procedure to switch from Namenda 5 mg twice daily to Namenda XR 14 mg once daily.

- PO: May be administered without regard to food.
- Administer oral solution using syringe provided. Do not dilute or mix with other fluids.
- Swallow extended-release capsules whole; do not crush, chew, or divide. Capsules may be opened, sprinkled on applesauce, and swallowed. Entire contents of each capsule should be consumed; do not divide dose.

**Patient/Family Teaching**

- Instruct patient and caregiver on how and when to administer memantine and how to titrate dose. Take missed doses as soon as remembered but not just before next dose; do not double doses. Advise patient and caregiver to read Patient Instructions sheet.
- Caution patient and caregiver that memantine may cause dizziness.
- Advise patient and caregiver to notify health care professional of all Rx or OTC medications, vitamins, or herbal products being taken and to consult with health care professional before taking other medications.
- Teach patient and caregivers that improvement in cognitive functioning may take months, degenerative process is not reversed.

**Evaluation/Desired Outcomes**

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

Why was this drug prescribed for your patient?