Memantine hydrochloride

Category:

NMDA Receptor Antagonists

Pharmacokinetics:

Absorption/Distribution – Memantine is highly absorbed with peak concentrations reached in approximately 3 to 7 hours. The mean volume of distribution is 9 to 11 L/kg and the plasma protein binding is low (45%).
Metabolism/Excretion – Memantine undergoes little metabolism, with the majority (57% to 82%) of an administered dose excreted unchanged in urine.
Memantine has a terminal elimination half-life of about 60 to 80 hours. Renal clearance involves active tubular secretion.

Mechanism of action:

Persistent activation of CNS N-methyl-D-aspartate (NMDA) receptors by the excitatory amino acid glutamate has been hypothesized to contribute to the symptomatology of Alzheimer disease. Memantine is an NMDA receptor antagonist.

Indications:

Alzheimer disease: For the treatment of moderate to severe dementia of the Alzheimer type.

Administration and Dosage:

Memantine can be taken with or without food.
Dosage: The recommended starting dose of memantine is 5 mg once daily. The recommended target dose is 20 mg/day. Increase the dose in 5 mg increments to 10 mg/day (5 mg twice daily), 15 mg/day (5 mg and 10 mg as separate doses), and 20 mg/day (10 mg twice daily). The minimum recommended interval between dose increases is 1 week.

Contraindications:

Known hypersensitivity to memantine or to any excipients used in the formulation.

Precautions:

GU conditions: Conditions that raise urine pH may decrease the urinary elimination of memantine, resulting in increased plasma levels of memantine.
Renal function impairment: Consider dose adjustment in patients with mild, moderate, and severe renal impairment. The use of memantine in patients with severe renal impairment is not recommended.

Pregnancy and breast feeding:

Pregnancy: Category B
Lactation: It is not known whether memantine is excreted in human breast milk.

Side effects:

Adverse reactions occurring in at least 3% of patients include the following: back pain, confusion, constipation, coughing, dizziness, hallucination, headache, hypertension, pain, somnolence, vomiting.

Drug Interactions:

NMDA antagonists: The combined use of memantine with other NMDA antagonists (amantadine, ketamine, and dextromethorphan) has not been systematically evaluated. Approach such use with caution.
Drugs eliminated via renal mechanisms: Coadministration of drugs that use the same renal cationic system, including hydrochlorothiazide (HCTZ), triamterene, cimetidine, ranitidine, quinidine, and nicotine, potentially could result in altered plasma levels of both agents.
Drugs that make the urine alkaline: Alterations of urine pH toward the alkaline condition may lead to an accumulation of the drug with a possible increase in adverse effects.

Packaging:

Memantine is available as 10 mg F.C tablets in box of 30 tablets.

Storage:

- Store below 30 °C
- Protect from moisture and light
- Keep out of the reach of children