Memantine

Memantine is an NMDA receptor antagonist drug, which helps prevent excitotoxicity in patients with Alzheimer's disease. It is a glutamergic antagonist at NMDA receptors. This medication works by halting an influx of Ca²⁺, preventing excitotoxicity to neurons. Neuronal excitotoxicity is mediated by Ca²⁺, which activates intracellular enzymes, leading to cell destruction. Thus, by halting this influx, memantine shows symptomatic improvement in patients. This drug has been shown to have a modest effect on moderate and severe Alzheimer's cases, while having little benefit in mild cases of Alzheimer's disease. Though rare, patients taking memantine can experience the side effects of confusion and hallucinations.



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Indications

Alzheimer's Disease
Old-timer
Memantine is an NMDA receptor antagonist drug which helps prevent excitotoxicity in patients with Alzheimer's.

Mechanism of Action

NMDA Receptor Antagonist
NMDA Receptor Ant-toga
Memantine is a glutamatergic antagonist at NMDA receptors. This action allows to impede an influx of Ca²⁺, halting excitotoxicity to neurons. This drug is low affinity and short-acting with a modest effect.

Prevents Excitotoxicity
Blocking Excited-X-toxic nerves
By antagonizing NMDA receptors, excitotoxicity is prevented in neurons. Excitotoxicity is mediated by Ca²⁺ which activates intracellular enzymes, leading to cell destruction.

Side Effects

Confusion
Confucius
An adverse effect of treatment with memantine is confusion in patients.

Hallucinations
Halloween-hallucination
Patients taking memantine can suffer from hallucinations.

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