Haloperidol (Haldol)

Haloperidol (Haldol) is the most commonly used first-generation antipsychotic medication and acts as a dopamine antagonist. By blocking the dopamine receptors, haloperidol decreases activity of the dopaminergic tracts in the central nervous system and lowers the therapeutic effects of levodopa. Haloperidol is primarily indicated for migraines and schizophrenia but may also be used for psychosis, mania, and delirium.



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Mechanism

High Potency Antipsychotic

High Pot Ant-tie-psychiatrist

Haloperidol is a high-potency antipsychotic. Potency refers to the dosing amount necessary to elicit a therapeutic effect. Therefore, a smaller amount of a high-potency drug yields similar effects to a larger amount of a low-potency drug. High potency antipsychotics have a higher incidence of extrapyramidal side effects when compared to low potency ones. Haloperidol is considered a major tranquilizer.

Indications

Migraine

Mind-rain

Although considered an off-label use, the dopamine antagonist effects of Haloperidol may be used to decrease dopaminergic hyperactivity associated with migraine headaches.

Schizophrenia

Sketchy-fern

Schizophrenia has been associated with excess levels of dopamine activity in the brain. Haloperidol is a neuroleptic medication that blocks dopamine receptors and decreases schizophrenic symptoms.

Side Effects

Extrapyramidal Symptoms

X-Pyramid

Prolonged or excessive use of haloperidol decreases dopamine activity and causes movement disorders known as extrapyramidal effects. Early symptoms include acute dystonia, parkinsonism, and akathisia. Later symptoms include tardive dyskinesia that manifests as repetitive and involuntary movements.

Weight Gain

Up-arrow Weight-scale

Excessive or prolonged use of haloperidol affects hormonal levels and subsequently metabolic processes that affect glucose levels and lipid levels, ultimately leading to weight gain.

QT Prolongation

QT-heart Prolonged

Haloperidol may cause QT prolongation by blocking potassium channels, resulting in serious cardiac dysrhythmias. It is important to avoid administering Haloperidol with other QT-prolonging drugs, such as amiodarone or erythromycin, because it may potentiate cardiac dysrhythmias. To decrease the risk of dysrhythmias, the patient should have an ECG and potassium test completed before treatment.

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Restlessness

Restless-wrestler

Akathisia is characterized by restlessness and manifests as constantly moving. Although the exact cause of akathisia remains unknown, it has been associated with medications such as Haloperidol (Haldol) that block dopaminergic transmission in the brain. Akathisia can be resolved by switching to a low-potency antipsychotic or using other medications (beta blockers, benzodiazepines, anticholinergics) to suppress symptoms.

Considerations

Caution in Seizure Patients

Caution-sign Caesar-patient

Haloperidol should be administered with caution because antipsychotics lower the seizure threshold and, therefore, increase the risk of seizures. Seizures may occur in susceptible individuals with seizure disorders or with excessive doses of haloperidol. During treatment, the patient should be monitored.

Neuroleptic Malignant Syndrome

Nerve-leopard and Malignant-man

Excessive amounts of haloperidol may cause neuroleptic malignant syndrome, a condition that affects multiple organ systems and ultimately leads to death. Symptoms of neuroleptic malignant syndrome include rigidity, sudden hyperthermia, and autonomic instability characterized by fluctuations in blood pressure and heart rhythms. Other symptoms include altering level of consciousness, seizures, and comas. It is important to cease the medication immediately and initiate supportive measures.

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