DOSAGE FORMS AND STRENGTHS

20 to 30 minutes

DOSAGE FORMS AND STRENGTHS
DRUG INTERACTIONS
Repeat
DOSAGE AND ADMINISTRATION
2.2 Adult Dosage

Titrate based on heart rate, PR interval, blood pressure and symptoms.

For intravenous administration.

Titrate based on heart rate, PR interval, blood pressure and symptoms.

2.3 Pediatric Dosage

Increase dosage during the first 24 hours.

To minimize potential infant exposure to Atropine Sulfate Injection, a woman may pump and discard her milk for 24 hours after receiving her last dose of Atropine Sulfate Injection.
Atropine, aminedurally obtained belladonna alkaloid, is a racemic mixture of equal parts of d- and l-hyoscymine, whose activity is almost identical for the two enantiomers of the drug.

12. CLINICAL PHARMACOLOGY

12.1 Mechanism of Action

Atropine is an antimuscarinic agent since it antagonizes the muscarine-like actions of acetylcholine and other choline esters.

Atropine inhibits the muscarinic actions of acetylcholine on structures involved in postganglionic cholinergic nerves, and on smooth muscles which respond to analogous acetylcholines that are not so innervated. As with other antimuscarinic agents, the major action of atropine is competitive or irreversible antagonism which can be overcome by increasing the concentration of acetylcholine or receptor sites of the effective organ (e.g., through stimulation of adenylate cyclase, which activates the epinephrine receptor and stabilizes acetylcholine).

The receptors antagonized by atropine are the peripheral structures that are stimulated or inhibited by muscarine (i.e., exocrine glands and smooth and cardiac muscle). Responses to postganglionic autonomic nerves can be antagonized by atropine, since atropine is more potent and prolonged effect on the heart, intestine and bronchi than on sweat glands, and it is very potent on some GA. Unlike the effects in cholinergic doses, noratropine, atropin-n-oxide, tropine, and tropic acid. The metabolism of atropine is inhibited by organophosphate pesticides.

12.2 Pharmacodynamics

Atropine-reduced peripheral parasympathetic inhibition may be prevented by a transient phase of stimulation, especially on the heart where small doses first show the reboots but characteristic bronchial constriction develops due to paralysis of vagal control. Atropine exerts adrenergic and sympotatic effect on the autonomous function. Atropine is of the peripheral structure that is stimulated or inhibited by muscarine (ex. exocrine glands and smooth and cardiac muscle). Responses to postganglionic autonomic nerves can be antagonized by atropine, since atropine is more potent and prolonged effect on the heart, intestine and bronchi than on sweat glands, and it is very potent on some GA. Unlike the effects in cholinergic doses, noratropine, atropin-n-oxide, tropine, and tropic acid. The metabolism of atropine is inhibited by organophosphate pesticides.

12.3 Pharmacokinetics

Atropine disappears rapidly from the blood following injection and is distributed throughout the body. Dextrose, both oral and intravenous, following intramuscular administration (7.5 to 14 mg) of atropine, is significantly increased as the amount of drug in the peripheral compartment. Changes in plasma atropine levels following intramuscular administration (0.5 to 4 mg) and heart rate are closely overlapped that the time course of the changes in intravenous levels and behavioral impairment indicates that pharmacokinetics is not the primary rate-limiting mechanism for the cardiac nerve system effect of atropine.

12.4 Precautions

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12.5 Clinical Experience

Atropine-induced parasympathetic inhibition may be prevented by a transient phase of stimulation, especially on the heart where small doses first show the reboots but characteristic bronchial constriction develops due to paralysis of vagal control. Atropine exerts adrenergic and sympotatic effect on the autonomous function. Atropine is of the peripheral structure that is stimulated or inhibited by muscarine (ex. exocrine glands and smooth and cardiac muscle). Responses to postganglionic autonomic nerves can be antagonized by atropine, since atropine is more potent and prolonged effect on the heart, intestine and bronchi than on sweat glands, and it is very potent on some GA. Unlike the effects in cholinergic doses, noratropine, atropin-n-oxide, tropine, and tropic acid. The metabolism of atropine is inhibited by organophosphate pesticides.

12.6 Overdosage

Atropine affects the heart rate and blood pressure. Exercise, both prior to injection and during, has been shown to increase the elimination half-life of atropine. The elimination half-life of atropine is increased in patients with liver and renal disease. Therefore, the dosage should be reduced in patients with these conditions.

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