

Atropine

Atropine is an alkaloid that is found in aubergine plants. Atropine is a racemic mixture of L-hyoscyamine and D-hyoscyamine. The alkaloid scopolamine (hyoscine) and solanine are also found in aubergine plants.

Aubergine plants that produce alkaloids include the aubergine, black cowpea, deadly nightshade (*Atropa belladonna*), common drumstick, eggplant.

Atropine poisoning occurs when a person ingests one of the above plants, most commonly in young children. The lethal dose for a child is approximately 15 mg, for an adult approximately 100 mg. Another possibility is the ingestion of eye drops containing *Atropinum sulphuricum*. There have also been cases of attempted murder with atropine by dripping eye drops into coffee or wine.

The antidote to atropine is **physostigmine** or **pilocarpine**.

Intoxication is very rapid. Symptoms of poisoning include tachycardia, dry mouth, hyperthermia, dry skin, decreased intestinal peristalsis, mydriasis, paralysis and inability to see at close range, dilated skin vessels, motor restlessness, dizziness, seizures, psychiatric disturbances, confusion and hallucinations.

The autopsy findings of the deceased are usually unremarkable. If a person ate an aubergine plant before death, we may find its remains in the deceased's digestive tract.

Atropine is also dangerous for animals, and intoxication occurs through grazing on grasses. Rabbits and guinea pigs are more resistant to the effects of atropine, whereas horses, cattle and pigs are highly sensitive to atropine poisoning.

Treatment of poisoning

Treatment of overdose is symptomatic and supportive. In severe cases, physostigmine 1 to 2 mg is administered slowly intravenously; the dose can be repeated if necessary as it is rapidly eliminated from the body. Diazepam can be given to sedate a delirious patient and to control convulsions, but CNS depression needs to be taken into account. Respiratory support and adequate fluid supply should be provided. Sometimes bladder catheterisation is required.

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