



“A REVIEW ON ABRUS PRECATORIUS (GUNJA) POISONING IN AYURVEDA”

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Abstract:

Ayurveda is an ancient Indian system of medicine, which stresses principally on prevention of body ailments rather than simply relieving pathological problems or symptoms. Ayurveda believes in the treatment of an individual as a whole. Public health as a discipline is mainly seen as a part of or a similar stream to community medicine. In Ayurveda ‘Damshttra’ Chikitsa¹; it includes the knowledge & study of Visha, its side effects etc. It is very important aspect in Ayurveda science. It is one of the vegetable poisons. Gunja it is also called as ‘Liquorice’. In local it is called as Ratti. This plant is found everywhere in India. But its seeds are poisonous. Therefore, seeds of Gunja are used for poisoning. It is used to kill both animals as well as human beings. Gunja comes under the vegetable poisoning.

Keywords: *Vegetable Poison, Gunja, Poisoning, Medicolegal Aspect*

Introduction:

This is also known as Indian liquorice, gunchi or rati. The plant is found all over India and though all its parts are poisonous, the seeds are commonly used as poison. They are of the size of a small pea, about 0.85 cm long and 0.65 cm broad, and have an average weight of 120 mg. They are tasteless, odourless, oval, and red in colour, with a black spot on one pole. The active principle is abrin, a toxalbumin, and its actions resemble those of viperine snake bite. Gunja comes under the vegetable poisoning².

Synonym: Rakta, Raktika, Tamrika, Aruna, Krushnala, Ghunghuchi, Kaktika³.

Phytochemistry of Gunja⁴ :

Latin name	Family	Guna	Rasa	Virya	Vipaka
Abrus precatorius	Leguminosae	Laghu, Ruksha, Tikshna	Tikta Kashaya	Ushna	Katu

Chemical composition⁵ :

In the seeds of Gunja ; ‘Abrin’ named poisonous drug is present. Also Abrussic acid, Haemagglutinin, Glycirrhizine constituents are present. Abrin is an poisonous content present in the seeds of Gunja. It contains globuline and albumose. Globuline is strong, but is disappears on boiling.

Symptoms and signs⁶:

When the seeds are swallowed raw or after cooking, they are not poisonous. Poisonous symptoms resembling viper bite follow if an extract is injected under the skin or into a wound. Such a method is used to poison cattle by means of sui.

Suis are fine needles prepared by decorticating the seeds and powdering them, followed by mixing the powder with opium, onion, dhatura and spirit or water to make into a paste, and the paste shaped into small sharp needles, which are allowed to harden by drying in the sun. The needles are 15 mm long and weigh about 90-120 mg. Two or three of them are fitted to the holes made in a small wooden stick, with which a blow is struck to the animal. This results in a local lesion, characterized by oedema, necrosis and oozing of hemorrhagic fluid from the puncture site. The animal becomes apathetic and drowsy. It is disinclined to take food. In three or four days, it is unable to move, drops down, becomes comatose and dies. Convulsions may precede death. The symptoms resemble those of viper snake bite, for which they may be mistaken.

Human poisoning is characterized by a local painful swelling and ecchymosis, followed by necrosis. The patient suffers from vertigo, cardiac arrhythmia, convulsions and death. When ingested, there is nausea, vomiting, abdominal pain, diarrhoea, and collapse.

Fatal dose and fatal period:

The fatal dose is 1-2 seeds by mouth or 90-120 mg abrin by injection.

The fatal period is 3-5 days.

Treatment:

- Gastric lavage
- This consists in dissecting out the sui and injection anti-abrin.
- The rest of the treatment is symptomatic.
- Sodium bicarbonate 10 mg.

Postmortem appearances:

The injured site is swollen, inflamed and necrosed. Fragments of sui are usually found in the wound. Haemorrhagic patches are seen under mucous membranes. Internal organs are congested and haemorrhagic.

Medicolegal aspects⁷:

Suis are used to kill cattle either to produce cheap hides or for revenge. Human poisoning by keeping a sui-spike between fingers and giving a slap or contaminating wounds thereby, is recorded. Malingerers use the powdered seeds to produce conjunctivitis. The use of abrus as an arrow poison is known.

Discussion :

In Ayurveda Ashtanga Ayurveda described about the Damshttra Chikitsa ; which includes the study of Visha and its management. Ayurveda is the science of life. Which deals with various principles and modalities. Damshttra Chikitsa also called as 'Agada tantra'. Where the management related to the Visha, Visha dravya, Medico-legal aspects are explained. There are various types of Poisonous drugs. In which Gunja i.e. Abrus Precatorius is an Vegetable poison. Its seeds are very attractive by its appearance. In Gunja the seeds are poisonous. It contains Abrin poison which is responsible for death. It is formed in the form of Sui. It is used to kill cattle as well as human beings through the use of sui in which powdered seed drug poured. It causes nausea, vomiting etc symptoms. It is an accidental source for children for its poisoning effects. Though it is an important poisonous drug in Ayurveda.

Conclusion:

Gunja is one of the Vegetable poisonings and it is also coming under the Upavishas. The seeds are poisonous but also, they are attractive by their appearance. Therefore, it is a source of accidental poisoning among the children. It is important poisonous drug in Ayurveda science. It is used to kill cattle and human beings.

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