“A Review Of Upvisha With Special References To Plant Kaner (Nerium Indicum).”

1Dr Rakesh Khanderao Nikam
(Associate Prof Department of Agad Tantra SSAAH&C, Jath)
Shantabai Shivshankar Arali Ayurvedic Hospital & College, Jat, MH.

2Dr Amol Ramchandra Awalekar (Professor, & HOD Department of Rognidan).
Shantabai Shivshankar Arali Ayurvedic Hospital & College, Jat, MH.

Abstract:

Some of the Ayurvedic classics and texts in medieval period have classified all the poisons in to two categories as Mahavisha and Upavisha based on their toxicity and potency. Upavisha are the group of drugs which were less toxic in nature but produce certain toxic symptoms on consumption or administration.

*Nerium oleander* most commonly known as *oleander* or *nerium*, is a shrub or small tree cultivated worldwide in temperate and subtropical areas as an ornamental and landscaping plant. It is the only species currently classified in the genus *Nerium*, belonging to subfamily Apocynoideae of the dogbane family Apocynaceae.

Nerium contains several toxic compounds, and it has historically been considered a poisonous plant. However, its bitterness renders it unpalatable to humans and most animals, so poisoning cases are rare and the general risk for human mortality is low.

So, this article is focusing on the Nerium upvisha mentioned Agadtantra of Ayurveda.

Key words: Nerium indicum, upvisha.
Introduction:

Some of the Ayurvedic classics and texts in medieval period have classified all the poisons in two categories as Mahavisha and Upavisha based on their toxicity and potency. Upavisha are the group of drugs which were less toxic in nature but produce certain toxic symptoms on consumption or administration.\(^1\)

*Kaner is a upvisha mentioned in Sushrut Samhita of Ayurved.* \(^2\)

*Nerium odorum*: Common names are white/pink oleander and kaner. Family Apocynaceae, Genus *Nerium*. Oleander is an evergreen 2–6 m tall shrub or tree flowering in the summer, with erect stems that splay outward as they mature. The flowers grow in clusters at the end of each branch; they are white to deep pink, or red. Yellow oleander (*Thevetia peruviana*) is other cardiotoxic *Apocynaceae*.\(^3\)

*Nerium odorum* has nerin, which contains the following cardiac glycosides: (1) neriodorin; (2) neriodorein; (3) karabin; (4) oleandrin; (5) folinerin; and (6) rosagerin.

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**Objectives:**

To Study of upvisha Visha Kaner (*Nerium indicum*) with special references to Agad tantra.

**Methods:**

Literature Survey Methods:

Nerium indicum is an evergreen shrub or small tree in the Dogbane family Apocynaceae. It has synonyms like Nerium oleander and Nerium odorum. It is also known as oleander from its superficial resemblance to the unrelated plant Olive olea. The white and red flowered variety both are equated with Nerium indicum. It is commonly found as an ornamental shrub in the gardens throughout the India. It is cultivated all over the world, especially in south-west Asia. N. indicum is exclusively native to India, Bangladesh, Nepal, Myanmar and China. It is about 5meter tall, large glabrous erect shrub with milky juice. It has linear- lanceolate, dark green shiny and thickened leaves. Flowers are fragrant, red, white and rose-colored. Whole plant of N. indicum, especially roots are highly toxic.\(^4\)

Vernacular names –

A) Sanskrit i) Ashwamar - kills horses ii) Hayamar - kills horses

B) Marathi - Kanher
C) Hindi - kaner Figure 1

D) English - Oleander, karan, rose laurel Sweta Karveer - 1 White or sweet scented oleander Peeta Karveer - Exile or yellow oleander, lucky nut Shwet/Rakta Karveer

Classification: A) According to Ayurved  i) Sthaavar visha - Vegetative ii) Moolavisha - (Sushrut)

iii) Upavisha - Bhaavprakaash & Rasatangini 5

B) According to Modern Medicine Cardiac Poison

AYURVEDIC PROPERTIES–

- Rasa – Katu, Tikta & Kashaya

- Guna- Laghu, Ruksha& Tikshna

- Virya- Ushna

- Vipaka – Katu

Pharmacology: Cardioactive (digitalis-like effect) and diuretic, anti-inflammatory, antifungal, insecticidal, antioxidant Activity, analgesic activity, antiulcer activity, Antimicrobial activity, anti diabetic activity. 6

Discussion:

EFFECTS OF POISONING 7–

Ingestion of this can affect the- G.I.T, the heart and CNS ● G.I.T- nausea and vomiting, excess of salivation, abdominal pain, diarrhoea-that may or may not contain blood.

● Cardiac Symptoms - irregular heart rate, Tachycardia, Extremities may become pale and cold due to poor or irregular circulation.

● CNS symptoms- drowsiness, tremors or shaking of muscles, seizures, collapse and even coma that can lead to death, Other symptoms – Jaundice, Renal Failure, ECG Changes, Sinus bradycardia, AV block I &II, ST depression, Ventricular and atrial ectopic.

→ Oleander sap can cause skin irritation, severe eye inflammation, and allergic reaction characterized by dermatitis

Fatal Dose – Fatal dose is 15-20g of root.

Fatal Period- Fatal period usual is 24-36 hrs.
Shodhan:
Karvira (Nerium indicum). Roots are purified by Swedan process in Dola Yantra using Godugdh for 3 hours, then washed with water and dried. After Shodhana, Oliandrin decreases. Karvira is used externally only.

MEDICOLEGAL ASPECTS$^8$ –
1. Suicide is common among village girls, using it as a paste or decoction.
2. It is used as an abortifacient, applied both locally and internally.
3. Homicide is rare.
4. Accidental poisoning is sometimes met with when decoction is used. Externally to reduce swelling. b. As a remedy for venereal diseases. c. As a love-philter (increases attraction between the giver and taker). d. For treatment of cancer and ulcers.
5. It is used as cattle poison.
6. Nerium odorum resists heat and can therefore be detected even from the burnt remains of the dead body.

Being a poisonous plant Kaner is being used widely in Ayurveda since ages. There are many formulations in which it is used for local and internal use. This plant although is poisonous but could be of varied uses if investigated and researched.

Therapeutic uses: $^9$
Ayurvedic and traditional practitioners have been using it in the treatment of many diseases such as dermatitis, eczema, psoriasis, herpes, sores, abscesses, warts, corns, skin cancer, ringworm, scabies, epilepsy, asthma, malaria, heart disease etc.

It is indicated in Hrdroga (cardiac disease), Jvara (fever), Krimiroga (disease due to microbes and parasites), Kandu (itching), Kushtha (skin diseases), Netraroga (eye diseases), Vrana (wounds), Tamakashvasa (asthma), etc

Conclusions:

1. Despite the danger, oleander is of great medicinal importance and used for heart conditions, asthma, epilepsy, cancer, painful menstrual periods, leprosy, malaria etc.
2. The plant is used as a rat poison and an insecticide.
3. It has been used by both Ayurvedic and conventional medical practitioners to treat a variety of illnesses.
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