



INTERNATIONAL JOURNAL OF CREATIVE RESEARCH THOUGHTS (IJCRT)

An International Open Access, Peer-reviewed, Refereed Journal

Understanding Rasa Panchaka WSR To JAYPALA

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Abstract:

Jaypala (*Croton tiglium* Linn.), a traditional medicinal plant widely used in Ayurveda, holds significant therapeutic potential due to its strong purgative properties. Despite its benefits, the plant is classified as Upavisha (semi-poisonous) because of its inherent toxicity, primarily found in its seeds. This research explores the traditional and scientific approaches to detoxifying Jaypala seeds through Shodhana (purification) methods, which significantly reduce its harmful effects. The word Upavisha means nearer to Visha i.e. drugs which possess the same qualities of visha, but not that much potent. Jayapala (*Croton tiglium*) is one among the Upavisha and a well-known plant in Indian System of Medicine as certain Number of formulations include this drug as an ingredient after proper purification. Also it is one of the known purgative Drug in Ayurveda with huge therapeutic values. This review article includes overall information about the plant Jayapala, Its botanical description, Toxicological aspect, treatment medico legal aspects in both Ayurveda and Modern toxicology, Its Shodhana (purification) processes.

Keywords: Jaypala, *Croton tiglium*, Purgative, Croton.

Introduction:

Jaypala (*Croton tiglium*) is a plant used in the Ayurveda Medicines from ancient time. In Ayurveda Samhitas, There are different formulations in which Jaypala plays role as important ingredients. According to Acharya Yogaraj Nambiar, Jaypala is Guru, Tikta & having Ushna Guna. Jaypala helps to cure Jwara and Kushta. It acts like Rechaka. It reduces Kapha, Kandu and Krumi. According to Bhavprakash Nighantu, if Jaypala is taken in excessive Quantity then signs and symptoms occurs like Daha, Udarshool, Sarakta Dravamal Pravrutti. According to Modern science Jaypala i.e. *Croton tiglium* is included as an Irritant organic vegetable poison. Croton oil plant is an erect, evergreen shrub or Small tree growing up to 7 meter tall. The plant has a very long history of herbal use, being employed as a Powerful laxative and as oil to treat a wide range of Skin problems. It has been grown for these uses for More than 2,000 years and is still often cultivated Now a days. *Croton tiglium* causes blistering externally and on ingestion causes severe gastrointestinal irritation with burning pain in the abdomen, vomiting, Powerful purging, and frequently a burning pain in the Anus. In substantial dosage, collapse precedes death. These signs and symptoms will find by consuming Jaypala.

Botanical name -*Croton tiglium* Linn.

VERNACULAR NAMES

English – Croton.

Hindi – Jamalgota.

Malayalam – Neervalam.

Tamil – nervalam.

Kannada – Nepal ,Japalbeej , Japala.

Telungu – Nepalamu.

SYNONYMS:

Rechaka (That which causes purgation), Beejarechaka (seeds causes Purgation), Jayapala (that which wins over diseases), Dantibeeja (seeds Resemble that of danti), Maladravi (that which causes liquid defecation), ,Kumbibeeja (pot shaped seed), Chitramoola (root resembles that of Chitraka), Sheegra (fast acting drug)

DESCRIPTION:

Morphology:

The Plant is a small evergreen tree of almost 4.5-6m in height with ash Coloured smooth bark and young shoots sprinkled with stellate hairs. Leaves are oblong to ovate-lanceolate, obtuse or rounded at the two Glanded base, membranous, yellowish green in colour and Minutely toothed. Flowers are small, unisexual, males on slender Pedicels, females larger on short thick pedicels. Fruits are ovoid or Oblong, 3 gonous capsules, seeds are smooth, testa is black, enclosing Reddish brown oily endosperm.

Poisonous part

Seed , root

Shodhana process of Jaypala (As per Rasatarangini)

Material

- 1.Jaypal seeds
- 2.Go -dugdha
- 3.Piece of cotton cloth
- 4.Dolayantra
- 5.Knife

6.Gas stove

7.Hot water

Procedure

Take required quantity of Ashuddha Jaypala seeds and removed the testa

A piece of cotton cloth is taken and Ashuddha Jaypala seeds is kept in it and Pottali is prepared.

Hang the Pottali in Dola Yantra. Sufficient amount of Godugdha is added to immerse the pottali completely.

The Dola Yantra is kept on gas burner and Madhayamagni is given for 3 hrs and then Pottali is taken out and washed with hot water.

Then the embryo (Jivha) of the seeds are removed with the help of knife.

Repeat this procedure for 3 days to obtain Shuddha Jaypala

Rasa Pamchaka (Properties):

Rasa – Katu

Veerya – Ushna

Vipaaka – Katu

Guna – Guru, Ruksha, Tikshna.

Prabhaava – No specific prabhaava

Karma (Action on Tridosha):

Vaata- Vaataghna

Kapha – Kaphaghna

Pharmacological Actions:

Udaraghna, Shoolghna, Kandughna, Kushthaghna, Raktvikaraghna, Pleehaghna, Ashmareeghna and Krumighna.

Srotas- Indicated Diseases.

Annavaha- Parinamshul, Krimi, Agnimandya, Aruchi.

Udakavaha- Jalodara.

Raktavaha- Kushtha, Raktashodhaka, Pleehaghna.

Shukravaha- Dhvajbhanga.

Mutravaha- Ashmarighna.

Active principle:

Croton, a toxic albumin, which is an irritant causes vesicles and boils/ bristles

Mechanism of action:

The toxic albumin present in the seeds is a toxic protein that disables ribosomes and thereby inhibits protein synthesis.

It is antigenic in nature, it agglutinates red cells and causes hemolysis and cell destruction

SIGNS AND SYMPTOMS:

On ingestion: There is hot burning pain from mouth to stomach, salivation, nausea, vomiting, purging, and bloody stools with griping pain followed by tachycardia, vertigo, great prostration, circulatory and respiratory collapse and death.

Local application: Burning sensation causes blisters which leaves behind scar and if comes in contact with eye causes corneal ulceration

FATAL DOSE

1-2ml of oil or 4-5 crushed seeds

FATAL PERIOD

4-6 hours to 3-6 days

TREATMENT

Stomach wash

Administration of demulcent drinks, like milk, or egg white

Morphine with atropine to allay pain and reduce intestinal secretions.

Glucose and saline re given IV to combat collapse and dehydration.

Borax is an antidote of croton seed poisoning.

Post – mortem Findings

The mucous membrane of the stomach and intestines is usually found Red, inflamed and excoriated at places.

Fragments of the seeds may be found in stomach and intestine.

The spleen and liver gets congested.

The kidneys may show cloudy swelling and congestion

Haemorrhage in internal organ

Medico legal importance:

Accidental poisoning results from swallowing croton oil by Mistake, or when taken in large doses as a purgative or by inhaling Their dust

Suicide and Homicide is rare

Root and oil are taken internally as an abortifacient.

Oil is used as arrow poison.

OTHER FORMULATIONS

Ichabhedi Rasa, Draksasava and Dadimavaleha .

CONCLUSION:

In Ayurvedic classical references there are many medicinal herbs indicated in different diseases. Jaypala is the one which use in medicinal combinations to prepare formulation. It is the Natural products identified from traditional medicinal plant have always used in the way for development of new types of therapeutics. As per the Ayurveda, "even a strong poison can be converted to an excellent medicine if processed and administered properly. On the other hand, even the most useful medicine may become a poison if handled incorrectly." Shodhan process has immense effect in reducing toxicity. Jaypala drug contain lot of impurities and toxicity. So these are extremely toxic and fatal, if administer in their crude form. Hence Shodhana is a preliminary step towards therapeutic administration Acharya Charaka said that if Vishadrava is taken in proper dose it acts as Medicine while if drugs are taken in more dose, it acts as poison.

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