

## Review on Jaypal (Croton tiglium) W.S.R to Samhitas .

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### Introduction

Jaypal (Croton tiglium) is a plant used in Ayurved medicines from ancient times. Jaypal seed has the intense power of purgation. It acts like a rechak. It is agnideepaka, teekshna. In Ayurved, It is used to cure udara, shoola, kandu, kushtha, raktvikara, pleeha, ashmaree and krumi. The active principle of croton tiglium is Crotin, a toxalbumin, which is an irritant & vesicant. A less poisonous glycoside, crotonoside is also present. The activity of the protein is a vesicant externally and as a purgative internally.

**Aim & Objective:** This paper will review the available Ayurvedic Samhitas, various texts, journals, and modern literature, with special reference to Jaypal (Croton tiglium).

**Materials & Methods:** To obtain more information about Jaypal, Various Ayurved Samhitas with their commentaries by different authors, web searches, various textbooks, and peer-reviewed journals were studied.

Vernacular names: Jaypal has been mentioned by different names in different regions. Below are given regional names according to region.

Latin: Croton tiglium, English: Kroton, Sanskrit: Jaypala, Danti, Jaipala, Hindi: Jamalgota, Bengali: Jaipal, Marathi: Jamalgota, Gujarati: Jepalo, Karnataki: Jepal, Arabi: Dand, Batu, Habusasalatin, Pharsee: Tukhmebande Jirakhtai. Burma: Kanako, Chinese: Pa Teou Pa Tou, French: Bois desmolusques, Italian: Grana tiglio, Java: Cheraken, Malyalam: Dantibijam, Nepal: Lapchebis, Persian: Bedanjirekhatai, Dund.

Synonyms: Jaypal, Dantibeej, Rechaka, Saraka, Tittirfal, Maladravi, Beejrechani, Kuntinibeej, Kumbhibeej, Shodhani, Ghantabeej, Chakradanti, Dantinibijak, Nikumbhabeej, Nikumbha.

### Classification:

#### According to Ayurveda

Samhitas	Classification
Bhavaprakasha nighantu Dhanwantara Nighantu	Guduchyadi varga
Kaiyyadeva Nighantu	Oushadi varga
RajaNighantu	Pippalyadi varga

Sharngadhara samhita Rasendra chudamani Rasa sara sangraha Ayurveda prakasha Rasa Tarangini	Upavisha
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### b) Microscopic Seed –

Shows a hard test a, consisting of an epidermal layer, covered externally with a thick cuticle and composed of oval and tangentially elongated cells, filled with brownish content; epidermis followed by a layer of radially elongated cells, slightly bent at middle, upper half portion filled with reddish-brown and lower half filled with yellow contents; innermost zone consists of tangentially elongated, thin-walled cells; endosperm consists of polygonal parenchymatous cells filled with oil globules, a few cells having rosette crystals of calcium oxalate; central region of endosperm shows a dicotyledonous embryo consisting of thin-walled parenchymatous cells.

Flowering and fruiting time: Summer to winter. Properties and Action

Rasa: Madhura.

Virya: Sheeta.

Vipaka: Madhura.

Guna: Guru, Snigdha.

Karma: Pittahara, Kaphahara, Rechana

### Chemical Compositions

Its Seeds contain 55-57% croton oil. The oil of jaypla contains a toxic called resin. In addition to the vesicant and purgative principle that passes into the oil, the seed kernels contain 2 toxic proteins, croton-globulin and croton albumin, sucrose-glycoside, and a glycosidecrotonoside. Seeds yield a fixed oil, tiglic acid, crotonic or tiglinic acid, crotonic or quartenylic acid, and croton oil. The major content of croton oil is oleic acid, which is mainly an activating principle.

### Part Used

Seeds, Seeds oil.

Important Formulations Icchabhedi Rasa, Ashvakanchuki Rasa, Jalodarari Rasa, Jwarari Rasa, Anjanbharav Rasa, Vrashchik Vishahar Pralepa.

## Therapeutic Uses:

Udara roga (Diseases of Abdomen), Vibandha (Constipation), Jvara(Fever). Dose: 6-12 mg. of the drug in powder form. 1/8 to 1/4 Gunja Anupana Cold Water Groups (Gana) Guduchyadi: according to Bhavaprakasha[ Triphaladi: according to R.S.S

## Phytochemical analysis

Croton tiglium seeds include 30-50% oil, 10% proteins, and a small amount of albumin. It yields about 50-60% of an acrid fixed oil & also rich in secondary metabolites including alkaloids and terpenoids. Among Croton species, only Croton tiglium, native and cultivated in India, has been extensively studied as a source of phorbol derivatives, which are irritant and inflammatory.

## Description of Jaypal according to Samhitaas

1. Charaka Samhita: a) In the first chapter of Sutrasthana i.e. Dirghanjivitiyaadhyaya, Jaypal is mentioned as Dravanti in 16 Mulini dravyas.

b) In the second chapter of Sutrasthana i.e. Apamargatanduliyaadhyaya, Dravnti is mentioned in virechak dravyas.

c) In the fourth chapter of Sutrasthana i.e. Shadavirechanashatashriyayadhyaya, Jaypal is mentioned as Dravanti. And it is said that there are 48 yogas of Danti & Dravanti.

d) A detailed description of these 48 yogas of Danti & Drvanti is in the twelfth chapter of Kalpasthana which is named Danti-Dravanti Kalpadhyaya.

2. Sushruta Samhita:

a) In the 11th chapter of Sutrasthana, Dravanti is used as Prativap to prepare Tikshna kshara.

b) Jaypal is included in Adhobhagahara Gana in the 39th Chapter of Sutrasthana.

c) In 42nd chapter of Sutrasthana i.e. Rasavisheshvidnyaniyamadhyaya, Dravanti comes under Tikta Rasatmak Dravya.

d) In the 44th chapter of Sutrasthana i.e. Viechandravavyavikalpa vidnyaniyamadhyaya there is the preparation of Dantyadi Ghruta which is useful in Visarpa, Daha, Kaksha, Alaji. Dantyadi tailam is useful in Prameha, Gulma, Vata & Kaphajanya Malavarodha.

e) In the 2nd chapter of Chikitsasthana i.e. Sadyovrunachikitsitamadhyaya, Dravanti is the main ingredient of Shodhana tail.

3. Ashtaamga Hridaya:

a. Jaypalis described as Nikumbha in the 19th chapter of Chikitsasthana i.e. Kushthachikitsitamadhyaya. It is one of the main ingredients of Mahavajraka Ghruta which is used in the Kushtha chikitsa.

b. In the 30th chapter of Uttarsthana, Dravanti is one of the main ingredients of Dantyadi Ghruta which is useful in the treatment of Apachi

4. ShaaramgadharaSamhita: In Shaaramgadhara Samhita, there are many medicinal preparations in which Jaypal was used as a key ingredient.

a) Narach Rasa: Jaypal is the main ingredient and is used in Aadhmana, Malavishtambha, and Udavarta.

b) Icchabhedi Rasa: Jaypal is the main content of the Icchabhedi rasa which is used in Vishtambha & Aadhmana.

5. Yogaratnaakara:

In Upavisha Prakaranam, Jaypal is described under Upavisha. In this, Jaypal is described as having properties like Tikta rasa and Guna like Guru, Ushna, and Sara. It is useful in Vruna, Kaphavikara, Krumivikara, Jwara, Kushtha. With this, the Shodhana process of Jaypal is also described in detail.

## CONCLUSION

From the above review study, it is clear that *Croton tiglium* is used to treat various diseases. As the plant contains some poisonous compounds, therefore, side effects and safety measures should be taken before administration to humans. Extensive and indiscriminate use may cause serious threats to human health and therefore proper evaluation of the toxicity and phytochemical screening of the plant is essential before it could be used for therapeutic medicinal interventions.

Due to its tremendous medicinal importance, this plant is extensively used in traditional medicine which leads to a definite threat to the genetic stocks and the diversity of this medicinal plant. The inevitable ruthless exploitation leading to their rapid depletion from the wild is a cause of concern. The pace of depletion has outpaced the pace of conservation. New strategies are being therefore introduced for rapid multiplication and conservation of this medicinal plant.

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