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## PAATALGARUDI (COCCULUS HIRUSUTUS)-AN AYURVEDIC REVIEW

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**Abstract:** Ayurveda is perceived as one of the most ancient & well documented system of medicine equally relevant in modern times. Its holistic approach whether for healthy individuals or for diseased ones remains unparalleled. Prevention of disease and promotion of health is the main aim of Ayurveda. It includes many of herbs to fulfill this aim, Paatalgarudi is one of them. Paatalgarudi is the Sanskrit name of the *Cocculus hirsutus*. *Cocculus hirsutus* is a tropical, invasive creeper with the common name broom creeper. It is a vine climbing up to 3m, with white to yellowish flowers & dark purple fruits 4 to 8mm in diameter. Acc. to Ayurveda, Paatalgarudi is *vrishya*, *vishdosh-naashaka*, *balya*, *santarpanii* in nature & mitigates the *vata kapha dosha*.

**Keywords:** Ayurveda, Paatalgarudi, Vishdoshnaashaka, Vrishya, Santarpanii.

**Introduction:** *Cocculus hirsutus* is known as *Paatalgarudi* in the Sanskrit<sup>[1]</sup>. *Paatalgarudi* is a plant of *menispermaceae* family. It is found throughout the country in scrub jungles, out skirts of deciduous forests and in the bush along road side even in the coastal area. It is also known as *Jaljamani* in *Ayurveda* because its leaf juice is added to water it kept undisturbed for a few minutes forms into a jelly, which is eaten for its cooling properties, due to this phenomenon it is known as *Jaljamani*. It attributes many properties such as *vrishya* (*aphrodisiac*), *balya*, *santarpanii* & *vishadoshnaashaka*, *kapha-vaata shaamaka* property in nature due to this it is used

in *agnimandhya*, *kushtha*, *mutrakricha*, *shukradourbalaya* like diseases.

### Etymological Derivation

**Paatalgarudi:** “*Paatalgaami Garuda Iva*”(AA.NI)<sup>[1]</sup>

- The Root is similar to Garuda attacking snake in *Paatala/Naga Loka*.
- Its *Moola*(Root)penetrates deep into the soil.

### Meaning of Scientific Name

**Cocculus:** Berry; the Seed Like Dehiscent or Indehiscent Lobes of Dry Pericarp Separating on Maturity<sup>[2]</sup>.

**Hirusutus:** Shaggy Hair.

**Table-1: Showing the Synonyms according to the various classical texts**<sup>[3, 4, 5]</sup>

<i>Mahamoola</i>	Roots Penetrating Deep into the Soil
<i>Paatalgarudi</i>	Its Mool Goes to Paatala Loka or it is Used in Snake Poison.
<i>Deerghkaanda</i>	Long Stem.
<i>Dridhkaanda</i>	Strong Stem
<i>Deerghvalli</i>	Long Climbing Undershrub
<i>Dridhlata</i>	Strong Climbing Undershrub
<i>Somvalli</i>	-
<i>Vikranta</i>	-
<i>Mechaka</i>	-
<i>Taarkshi</i>	-
<i>Sauparni Gaarudi</i>	-
<i>Vaasani</i>	-
<i>Mahabala</i>	-
<i>Vatsaadani</i>	Eaten by Children or Calf.
<i>Chillhint</i>	Sounds Like Beer and Mitigates the <i>Kapha &amp; Vata Dosha</i> .
<i>Jalskandani/Jaljamani</i>	Its leaf juice is added to water it kept undisturbed for a few minutes forms into a jelly,

which is eaten for its cooling properties, due to this phenomenon it is known as *Jaljamani*.

**Table-2: Showing the Vernacular Names according to the various classical texts** [3,5, 6, 7, 8]

Language	Names
Sanskrit	Paatalgarudi, Vatsaadani, Dirghvalli, Mahamoola, Chilhint, Dridhkanda, Garudisauparnii, Somavalli, Deerghkaanda, Dridhlata, Vikranta, Mechaka, Taarkshi, Vaasani, Mahabala, Jaljamani, Jalskandhi
Gujarati	<i>Vevadi, Vachana</i>
Marathi	<i>Vaghino Velo, Vaasan Bel, Taan, Hundir, Bhumpaad</i>
Hindi	<i>Jaljamani, Faridbooti, Chiireta, Chirhita,</i>
Bengali	<i>Shilinda</i>
Tamil	<i>Katukkodi</i>
Telugu	<i>Dusari Balli, Doosariteega</i>
English	<i>Broom Creeper, Ink Berry, Monkey Rope</i>

**Table-3:-Showing the Gana/Varg according to the various classical texts** [3, 4, 5, 6,7, 9, 10, 11]

Samhitas/Nighantu	Gana/Varg
<i>Bhaav Prakash Nighantu</i>	<i>Guduchyadi Varg</i>
<i>Raj Nighantu</i>	<i>Guduchyadi Varg</i>
<i>Adarsh Nighantu</i>	<i>Guduchyadi Varg</i>
<i>Kaidev Nighantu</i>	-
<i>Shaaligram Nighantu</i>	<i>Guduchyadi Varg</i>
<i>Madanpal Nighantu</i>	<i>Abhyadi Varg</i>
<i>Shodhal Nighantu</i>	-
<i>Dhanvantri Nighantu</i>	-
<i>Priyavrata Nighantu</i>	<i>Pippalayadi Varg</i>
<i>Nighantu Vigyana</i>	-
<i>Shankar Nighantu</i>	<i>Described But Not In Gana/Varg.</i>

**Table-4: Showing the Rasa Panchaka according to the various classical texts** [1,3,4,5,6,7, 9, 12, 13, 11]

RASA								
Rasa	B.N.	R.N.	AA.N.	P.N.	P.V	K.NI.	J.K.OJHA	
<i>Madhura</i>	-	+	-	-	-	-	-	-
<i>Katu</i>	-	-	+	-	-	-	-	-
<i>Tikta</i>	-	-	-	+(MOOLA)	+	+	+	+
GUNA								
Guna	B.N	R.N	AA.N.	P.N.	SH.N.	SHA.N.	M.N	P.V.
<i>Laghu</i>	-	-	-	-	-	-	-	+
<i>Snighdha</i>	-	-	-	-	-	-	-	+
<i>Pichiila</i>	-	-	-	-	-	-	-	+
<i>Sheet</i>	-	-	+	-	-	-	-	-
VIPAKA								
Vipaka	B.N	R.N	AA.N.	P.N.	SH.N.	SHA.N.	M.N	P.V.
<i>Katu</i>	-	-	+	-	-	-	-	+
VEERYA								
Veerya	B.N	R.N	AA.N.	P.N.	SH.N.	SHA.N.	M.N	P.V.
<i>Ushna</i>	-	-	+	-	-	-	-	+

**Table-5: Showing the DOSHKARMA according to the various classical texts** [3,4,5, 6,7, 9, 12, 11]

Doshkarma	B.P	R.N.	AA.N.	P.N.	SH.N.	SHA.N.	M.N.	P.V.
<i>Kaphashamaka</i>	+	-	+	-	-	+	+	-
<i>Vatashamaka</i>	+	-	+	-	-	+	+	-
<i>Pitta-</i>	-	+	+	-	+	+	-	-
<i>Raktanashaka</i>	-	-	-	-	-	-	-	+
<i>Tridoshshaamaka</i>	-	-	-	-	-	-	-	+

**Table-6: Showing the Karmas (pharmacological actions) according to the various classical texts** [3,4,5,6,7,9, 12,11]

Karmas	B.P	R.N.	AA.N.	P.N.	SH.N.	SHA.N.	M.N.	P.V.
<i>Vrishya</i>	+	+	+	-	+	+	+	+
<i>Santarpana</i>	-	+	+	-	+	+	-	-
<i>Ruchya</i>	-	+	+	-	+	+	-	+
<i>Vishghana</i>	-	+	+	+	+	+	-	+
<i>Dahashamana</i>	-	+	+	-	+	+	-	-
<i>Balya</i>	-	-	+	-	-	-	-	-
<i>Saraka</i>	-	-	+	-	-	-	-	-
<i>Swedala</i>	-	-	+	-	-	-	-	-
<i>Twagdoshhara</i>	-	-	-	-	-	-	-	+

<i>Raktabhaara-shamaka</i>	-	-	-	-	-	-	-	+
<i>Raktashodhak</i>	-	-	-	-	-	-	-	+
<i>Mutraka</i>	-	-	-	-	-	-	-	+

**Chemical Composition****Roots:** D-trilobine & DL-coclaurine <sup>[12, 14]</sup>**Stem & Root:** Trilobine, isotriline, colcaurine, magnoflorine, hirsutidin, cohirsine, cohirsinine, hirsutidine, shaheenine, cohirsitinine, jamanine, haiderine etc.**Leaves:** Mucilage**Therapeutic Uses** <sup>[7, 12, 15]</sup>

- The Root of Garudi is Rubbed & Applied as Snuff, Collyrium, Paste & in Take. It Counteracts the Snake Poison in Case Cyanosis has not developed.
- It is also useful in Guinea Worm.
- Leaf Juice with a form of Sugar (*Shakkar*) Cures the Leucorrhoea & Metrorrhagia.
- Its Root Powder with Other *Vata Dosha* Medicines Cures the *Sandhivata*.
- Its Root Decoction with Goat Milk Cures the Sandhivata, Amavata & other Skin Diseases.
- Leaf Juiced Mixed with *Jeera & Mishri Powder* Cures the Gonorrhoea.
- Its Dry Leaf Powder with Milk is *Vrishya & Balya*.
- Hot Poultice of Leaves Cures the Inflammation of Eyes.
- It is Helpful in Deaddiction of *Ganja, Bhanga* & Alcohol. For Deaddiction its Root Powder is use in the Dose of 10gm daily, after One Month Dose should be Reduced & If Vomiting Occurs also it should be Reduced.
- It Posses Blood Purifier Property, it can use also in the Place of Sarspilla.
- It is used in High Blood Pressure & Blood Disorders.
- It is used in the form of *LEPA* in *Visha* & Skin disorders.
- Paste of leaf is tied up in inflammation & injury, it reduces the redness & pain.also used in headache.
- Root is used in Pelvic Inflammation and *Prameha*.

**Therapeutic Indications:** Snake Poison, *Snayuka Roga* (Guinea Worm), *Mutrakricha* (Urinary Disorders), Skin Disorders (*Kushtha*), Rheumatoid Arthritis & Other inflammatory disorders, Gonorrhoea, Headache, *Prameha*, Fever, *Agnimandhya*, *Shukradourbalaya*. <sup>[1, 3, 7]</sup>**Part Used:** Leaf & Root & Whole Plant <sup>[7]</sup>**Posology**

- Leaf Juice(Extract) -10-20ML <sup>[3, 7]</sup>
- Root Powder-3 TO 6 GM
- Whole Plant Powder- 3 TO 6 GM

**Latest Research on Cocculus Hirusutus****Anti Microbial Activity of the Root** <sup>[16, 17]</sup>

- Ethanolic and Crude Alkaloidal Fraction Extract Showed Concentration Dependent Antimicrobial Activity Against *Staphylococcus Aureus*, *E.Coli*, *Pseudomonas Aeruginosa* & *Salmonella Typhii*.
- Research on Phytochemical Studies.
- The alkaloidal solution of *C. hirusutus* produced moderate to marked hypotension of prolonged duration in dogs without or significant effect on respiration.
- Both the alkaloidal solution and the total extract showed positive in tropic activity on isolated perfused frog heart. The activity of alkaloidal solution was comparable to that of 50-100µg of digoxin.
- The alkaloidal solution had relaxant & antispasmodic activities in rat ileum. It had a stimulating effect on the uterus of albino rat. The drug inhibited the acetylcholine-induced response on frog rectus abdominis muscle.

**Controversy**

- Thakur balwant singh opined that vatsadani term might have been used for Patalgarudi along with Guduchi. It is not quoted by Brhat trayi. <sup>[4, 7, 17]</sup>
- Its roots are used in place of *Patha*(*Cissampelos pareira*).
- Like *Paatalgarudi* there is one another herb named as *OORAP* (*Cocculus pendulus*).Main difference between both of them is that *Paatalgarudi* have dark green and hairy leaves from both sides compare to that *OORAP* have Both side smooth & light green colour leaves with dull apex. *Jalamani* has blossom of flowers but *Oorap* has does not blossom.*Oorap* and *Patha* both are used in place of *Jalamani*.

**Discussion**

Acc to *Ayurveda* *Paatalgarudi* named as *Cocculus Hirusutus* is very beneficial in the medicine field due to its amazing properties. If a person suffered from snake bite it is well used in that scenario also. Because it has antivenom

property regarding snake bite. Modern text also proved that it consists of highly valuable chemical constituent<sup>[5,7]</sup>.

It is highly useful in genital disorders, urinary tract disorders, skin disorders. Whole plant is useful but leaves and roots are mostly used. In *Ayurveda* it is well said that drug does work on the basis of the *Veerya* well known as active principle. In *Paatalgarudi Veerya* belongs to roots and leaves. It is *Tridoshshamaka* in nature but in *Tridoshshamaka* property it is mainly *Vatakaphanashaka* due to *Ushna Veerya*. It is also *Pitta Rakta Naashaka* and *Madhura* in *Rasa* due to this it is useful in high blood pressure and blood disorders.

**Conclusion:** *Cocculus hirsutus* is a well known climbing vine known as *Jaljamani* in *ayurveda* because its leaf juice is added to water it kept undisturbed for a few minutes forms into a jelly which is eaten for its cooling properties.<sup>[1, 3, 7, 17]</sup> Main chemical constituents are colcaurine and trilobine due to which it possesses many pharmacological properties. There is a controversy regarding *oorap* & *paatalgarudi* but *paatalgarudi* is quite different in nature. It is attributed with *Balya*, *Saaraka*, *Swedala*, *Vishaghana*, *Mutranjana*, *Jwaraghana* *Karmas*. It is well used for snake bite in ancient texts regarding this property it is known as *Paatalgarudi*. But the drug is not mentioned in *brihtrayee*. More research has to be needed.

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