

## CONTROVERSY ON INDRAVARUNI

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## ABSTRACT

Herbal medicines are being used by mankind for several year. In recent decade, there has been a tremendous increase in interest towards plant based medicines, especially for new sources of drugs. Indravaruni is a well known plant of ancient medical sciences. It is described in almost all Samhita's and nighantus of ayurveda. Indravaruni is *Citrullus Colocynthis* belongs to family cucurbitaceae, mostly found throughout India, both wild and cultivated. It grows in the state of nature in the arid tracts of north west, central and south india, and is met with in the Punjab, sind. The fruit ripens in the cold season and is offered for sale in north india by the herbalists in December and January. The roots and the whole fruit without the seeds are commonly used in india whereas only the pulp is official in the british pharmacopoeia. The Indian varieties of colocynth differ a little from the imported varieties and are nearly globular in shape and usually of the size of an orange or smaller with a surface marbled with green yellowish white patches. A number of substitutes of *Citrullus colocynthis* are found on the market. The fruit of *Cucumis trigonus*, *Cucumis pseudo colocynthis* grow abundantly in the mountainous regions of northern india and are frequently used to adulterate colocynth sold in the bazar. They can be differentiated from the round fruits of the drug by their smooth contour and oblong shape. Colocynth is not systematically grown anywhere in india except perhaps on an experimental scale near surat and karachi to prevent sand drifts.

## INTRODUCTION

Indravaruni *Citrullus colocynthis* (fam. Cucurbitaceae), an annual or perennial, wild herb with prostrate or climbing stem, occurring throughout the country.

## INDRAVARUNI

**Botanical name** – *Citrullus colocynthis* Schrad.**Family** – Cucurbitaceae**English** – colocynth, bitter apple**Hindi** – indrayan, makkal

## Synonyms

1. इन्द्रवारुणी (भा०) - इन्द्रा शक्तिसंपत्रा वारुणी जलरेचनी।
2. गवाक्षी (भा०) - गां भूमिमक्ष्णोति व्याप्नोति, विस्तृतत्वात् गोरक्षिवत् फलानि चास्याः।
3. गवादनी (भा०) - गोभिरदयत इति ।
4. चित्रा (भा०) - चित्रं चित्रितं फलमस्याः ।
5. इन्द्रवल्लरी (रा०) - महती वल्लरी लता ।
6. पीतपुष्पी (रा०) - पीतं पुष्पमस्याः ।
7. वारुणी (रा०) - जल रेचनी।
8. मरुसंभवा (कै०) - मरुप्रदेशे जाता ।

9. मृगैर्वारुः (कै०) - मृगाणामैर्वारुः कर्कटी, तैर्भक्ष्यमाणत्वात्।

10. विषघ्नी (सो०) - विषं हन्ति ।

**Distribution** – cultivated and wild throughout India in warm area.

**Morphology** – it is a perennial scabrid prostrate or climbing herb with angular stems and bifid tendrils.

**Leaves** – sinuately pinnatifid.

**Flower** – monoecious, solitary, axillary, yellow.

**Fruit** – globose, 3.5 – 10.5 cm in diameter, smooth, green mottled with yellow blotches, pulp spongy, bitter.

**Seed** – many, white or light brown.

**Part used** – roots, fruits.

## Properties and Action

Rasa – tikta

Guna – laghu, ruksha, tikshana

Virya – usna

Vipaka – katu

Karma – kaphhara, pittahara, rechana

Therapeutic uses – apachi, svasa, gulma, kamala, kasa, krmiroga, kustha, prameha, vrana, pliharoga, visavikara, gandamala.

#### Chemical Constituents

Alkaloids 1, 2 & 3, choline cucurbitacin B, cucurbitacins 1 & 2, citrullonol, citrullin, citrulluene, citrollic acid, elateridine, hexanorcucubitaicin 1, cucurbitacin E, citrullol, citronellal, methyleugenol, inositol, colocynthin, a- elaterin, hentriacontane, saponin, ipuranol, glycosides, tannin.

**Dose** – phala churan – 125–500 mg, moola churan – 1-3 gm.

**Formulations** – Narayan churan, indravarunikadi churna

**Contra Indications** – pregnant women, children, sensitive individuals, grahni



#### In Dhanwantri Nighantu

इन्द्रवारुणिकाऽत्युष्णा रेचनी कटुका तथा । कृमिश्लेष्मव्रणान् हन्ति हन्ति सर्वोदराण्यपि ॥

इन्द्रवारुद्वयं तिक्तं कटु पाके रसे लघु । वीर्योष्णं कामलापित्तकफश्लीपदनाशनम् ॥ (ध. नि.)

#### In Raj Nighantu

गुल्मपित्तोदरश्लेष्मकृमिकुष्ठज्वरापहा ॥

महेन्द्रवारुणी ज्ञेया पूर्वोक्तगुणभागिनी । रसे वीर्यं विपाके च किचिदेषा गुणाधिका ॥ (रा. नि.)

#### In Bhav Prakasha

ऐन्द्रिन्द्रवारुणी चित्रा गवाक्षी च गवादनी । वारुणी च परा अप्युक्ता सा विशाला महाफला ॥

श्वेतपुष्पा मृगाक्षी च मृगैवारुर्मृगादनी । गवादनीद्वयं तिक्तं पाके कटु सरं लघु ॥

वीर्योष्णं कामलापित्तकफप्लीहोदरापहम् । श्वासकासापहं कुष्ठगुल्मग्रन्थिव्रणप्रणुत् । प्रमेहमूढगर्भामगंडामयविषापहम् ॥ (भा.प्र.)

#### Classical Categorization

**Charaka Samhita** – mulinidravayas, virechanadravyas

**Shushrut Samhita** – shyamadi varga, Adhobhaghara

**Ashtanga samgraha** – shyamadi varga

**Bhav prakasha** – guduchayadi varga

**Nighantu Adarsh** – kushmandaadi varga

**Kaiyadeva Nighantu** – Ausadhi varga

**Madanpal Nighantu** – Abhyadi varga

**Raj Nighantu** – guduchayadi varga

**Shodhala Nighantu** – guduchayadi varga

#### Varieties

##### Dhanwantari nighantu

Indravaruni (C. Colocynthis)

Vishala (Trichosanthes palmata)

Swet pushpi (Cucumis Trigonus)

How ever he specially mentioned former two as indravarunidayam.

##### Bhav prakash: two type

Indravaruni (C. Colocynthis)

Mahendravaruni (T. Bracteata)

##### Bapalal Vaidya: four type

C. Colocynthis

Cucumis prophetorum

C. Trigonous

T. Palmata

#### Following Drugs Showes Controversy with Indravaruni

1. Cucumis trigonus
2. Trichosanthes palmata
3. Cucumis prophetorum
4. Bacopa monniera
5. Melothria maderaspatana

There are many species of indravaruni. But the following two are chiefly used for medicine.

1. Indri, indravaruni (small fruit)
2. Mahendravaruni, vishala (big fruit)

There is another variety which has spines on its fruits and is called as 'kanteri indrayan' in Gujrati. One with very small fruits has also small spines.

All are used in medicine more or less. But mahendravaruni or vishala (the colocynth) is largely used in medicine and so the description follows: -

#### 1. Indrayan Bhed

**Botanical name** – *Cucumis trigonus* Roxb.

**Family** – Cucurbitaceae

**Sanskrit** – Vishala, Chitrabhita, Chitravalli, Chitrphala.

**Hindi** – jangal indrayan, bislambi

**English** – bitter melon

**Distribution** – throughout India, in dry areas.

**Morphology** – A perennial scabrid monoecious tendrillar herb with angled stem.

**Leaves** - deeply, palmately five lobed, scabrid on both sides, hispid on the nerves beneath and rounded at the apex the male flowers yellow in small clusters on slender peduncles, fruits ellipsoid or sub globose, yellow with green stripes, seeds white, ellipsoid.



#### Guna karma

Ras – tikta

Guna – laghu, sara

Virya – ushna

Vipaka – katu

Karma – Mazza - tivra virechaka

Moola – somya virechaka

Part used – roots, fruits and seeds

#### 2. Vishala / Mahakala / Indrayan Bhed

**Botanical name** – *Trichosanthes palmata* Roxb.

**Family** – Cucurbitaceae

**Hindi** – lal indrayan, mahurar, mahar, mahakal

**Distribution:** Throughout India, upto an altitude of 2,500 m

**Morphology** - A large, branched woody tendril climber, leaves palmately 3-5 lobed, dark green above, pale beneath; flowers unisexual, fruits globose, red when ripe with 10 orange streaks; seeds numerous, smooth.



**Parts used:** roots, fruits

#### Properties and uses

The roots are bitter, astringent, emetic, abortifacient and purgative. They are good for hemicrania, carbuncles and gonorrhoea. The fruits are very valuable in curing otitis and rhinitis and are also recommended for hemicrania, inflammations, weakness of lymphs, vitiated conditions of vata, asthma, ophthalmia, epilepsy and leprosy.

#### 3. Indri

**Botanical name - Bacopa monnieri (linn.)**

**Family** – Scrophulariaceae

**English** – thyme leaved gratiola

**Hindi** – brahmi, jalnimbha

**Distribution** – throughout india in wet places upto 1200m elevation.

**Morphology** – a prostrate or creeping, juicy, succulent, glabrous annual herb rooting at the nodes with numerous ascending branches, leaves simple, opposite, flower pale blue or whitish, fruits ovoid, seeds minute, numerous.

**Part used** – whole plant.

#### Properties and uses

The plant is astringent, bitter, sweet, cooling laxative, intellect promoting, anti-inflammatory, anticonvulsant. It is useful in vitiated conditions of kapha and vata. Neuralgia, inflammations, epilepsy, insanity, amnesia, sterility, fever and general debility.



#### 4. Cucumis prophetarum Linn

Monoecious. Stems slender, branched, angled and grooved. Tendrils very short. Leaves morphous, rigid, 2-5 cm. long and broad, somewhat ash-coloured scabrid. Scabrid, coarsely hairy on the nerves beneath. Male flowers solitary or fascicled; peduncles filiform, densely hairy, female flowers: Peduncle (in fruit) stout. Fruit sub globose, 2.5-3.8 cm. long and nearly as broad, longitudinally striped with green and white, echinate, the spines not or scarcely pungent 1.25-3 mm. long. Seeds ellipsoid, not margined, 4 mm. long.

The plant is emetic and purgative.

In Baluchistan, about four mashas of the dry roots well

powered and eaten with curds or butter act as a strong purgative. the fruit is taken in milk to cure fever.

In South Africa use the fruit pulp as a purgative.



### 5. Melothria Maderaspatana

**Family** – Cucurbitaceae

**Sanskrit** – trikosaki, krtarandhra

This plant differs from the first two in its medicinal properties. While the roots are used in the first two Cases, the whole plant is used in the third plant. Synonyms like Vishala, chitravalli, indravaruni etc, are not given to this plant. So, its use as Vishala is a case of mistaken identity. It should be treated only as an adulterant.



### DISCUSSION

- In jamini grihsutra Indravaruni – indravalli
- In keshavpaddati – indravaruni used in shvet kustha and palti
- In pepalayad samhita (Atharvaveda) – indravaruni used as vishghana
- In sankhayan grihsutra – kakatani – mool paste for sutikagara lepan and rakshoghana
- In Narayan bhashya – kakaadani and indravaruni bhed
- In samvidhan brahman (sayaanbhashya) – krishna - krishanavarne Krishanavarnpadike va indravaruni
- Paniniye ganpatha – Gavadini
- In atharvaveda – nili

The properties of these two plants indravaruni (Citrullus colocynthis) and indrayan bhed (Cucumis trigonus) are said to be more or less the same. That may be the reason for giving synonym like Vishala and chitravalli to both. In both plants the roots have purgative properties. They are also effective in the treatment of jaundice and the vitiated condition of kapha. So the use of both these plants as Vishala is justified.

However, these are two more plants used as Vishala.

1. Melothria maderaspatana (Cucurbitaceae)
2. Trichosanthes palmata Roxb. (Cucurbitaceae)

However all these plants are in use today. Moreover, instead of using only the root, all the plant parts are used as raw drugs. Both the root and fruit are officinal (used for their medicinal value by apothecaries) in the plant. They have purgative properties, but the most commonly used part is the fruit. It is effective in treating the vitiated conditions of vata. Synonyms like Vishala and indravaruni are not given to this plant. Its general qualities also differ from those of the first two plants. Thus, the use of this plants as indravaruni is questionable.

### CONCLUSION

Earliest references about indravaruni are available from 'Keshava pandit' where in it is indicated for leukoderma (swet khustha) and grey hair (palita).

Charaka quoted it among the adhobhaghara group of dravyas. Both shushrut and vagbhata mentioned it under syamadi varga.

The drug is extensively quoted by brhat trayi texts as well as the Nighantu works. It is mainly used in the management of khalitya and palitya (baldness and grey hair), unmada and apasmara (schizophrenia and epilepsy), kamala (icterus) and other diseases.

Colocynth is used in medicine as a drastic purgative, and in the form of solid extract enters into many of the purgative pills of modern pharmacy.

In bhav prakasha, aendri is the synonym of indravaruni but indravaruni is a highly purgative drug and cause uterine contraction so in Prajasathapana mahakhasya of Charak, aendri is not indravaruni and there it is taken as *Bacopa monniera*. (jal nimbha).

According to acharaya P.V. Sharma in detailed drug, indravaruni is *Citrullus colocynthis*.

In Bhav Prakash also, *Citrullus colocynthis* is indravaruni

Ayurvedic pharmacopoeia of india mentioned *Citrullus colocynthis* as indravaruni.

So after looking at all different aspects, we can conclude that the official source of indravaruni is *Citrullus colocynthis*.

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