

A CLASSICAL REVIEW STUDY ON HARIDRA (*CURCUMA LONGA* LINN.)

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ABSTRACT

Curcuma longa linn. or *Haridra* commonly known as turmeric is a plant of zingiberaceae family which is vital part of various ayurvedic formulations like *Chandraprabha vati*, *Mahatikta ghrta*, *Haridra Khand* etc. The word *Haridra* signifies its golden color or hue. *Haridra* has various pharmacological properties like anti-inflammatory, antibacterial, antidiabetic, anti-helminthic, hepatoprotective, hypolipidemic, antihistaminic and antifungal properties. Ancient Ayurvedic texts describes *Haridra* in treatment of various disorders like *prameha*, *krimi roga*, *aruchi*, *Pandu*, *Visha roga* etc. This article will provide a classical insight about morphological features, its pharmacological properties and therapeutic uses of *Haridra*.

KEYWORDS: *Haridra*, *Ayurveda*, *Curcuma longa*, curcumin.

INTRODUCTION

Haridra is an important herb used in medicine as well as in rituals. It is a well known spice in Indian culinary used in various recipes. Therefore it combines both diet and medicine. Many of its functions have been discovered by modern science but before this its high medicinal values has been described in ancient ayurvedic text. In *Charaka Samhita*.^[1] *Sutrasthana* it was mentioned in, *Lekhaniya*, *kustaghna*, *kandughna*, *krimighna gana*, in *Chikitsasthana* it is used in *prameha chikitsa*, *arshas chikitsa* etc. In *Shushruta Samhita*^[2] *Shushruta* mentioned

Haridra in *Sutrasthana* in *Haridradi gana*, *Mustadi gana*, *Sleshma samshamana varga*. Its *prayoga* in different *rogas* have been mentioned in *Chikitsasthana* and *Uttaratantra*. In *Astanga Sangraha*^[3] – In *Haridraadi gana*, *Mustadi gana*, *Tikta skandha*, *Lekhaneeya dravya*, *Shirovirechanopaga dravya*, *kustaghna dravya*. In *Astanga Hridaya*^[4] – In *Sutrasthana*, *Haridradi*, *Mustadi*, *Tiktha skandha*, *Lekhaneeya dravya*, *Shirovirechanopaga*, *Kustaghna dravya* and *Chikitsasthana of Astanga hridaya*. In *kashyapa samhita*^[4] – In *kalpasthana* and in *khilasthana* *Haridra* is mentioned as an ingredient of *dhupa* & also in *chikitsa* of a *kasa*, *shwasa*, *charmada* etc. In *Sangraha Kala* Authors of *Chakradatta*, *Yoga Ratnakara*, *Rasa Ratna Samucchaya*, *Bhaishajya Ratnavali*, *Rasatarangini* etc. have mentioned this drug in their literature. In *Aurvedic Pharmacopia of India* and *Ayurvedic Formulary of India* Drug *Haridra* has been mentioned. Thus *Haridra* is one of the best herbal drug and important drug from *vedic period* to till today.

Table Shows the categorization of Haridra in *Brihatrayi*^[6]

Name of Samhita	Categorization of Haridra
<i>Caraka Samhita</i>	<ol style="list-style-type: none"> 1. <i>Lekhaniya Mahakashaya</i> 2. <i>Kusthaghna Mahakashaya</i> 3. <i>Visaghna Mahakashaya</i> 4. <i>Sirovirecana dravya</i> 5. <i>Apatarpanausadha</i> 6. <i>Tikta Skandha</i> 7. <i>Vamana dravya</i>
<i>Susruta Samhita</i>	<ol style="list-style-type: none"> 1. <i>Vacadi gana</i> 2. <i>Haridradi gana</i> 3. <i>Mustadi gana</i> 4. <i>Vata samsamana</i> 5. <i>Slesma samsamana</i> 6. <i>Lakshadi gana</i> 7. <i>Tikta varga</i>
<i>Astanga Hridayam</i>	<ol style="list-style-type: none"> 1. <i>Haridradigana</i> 2. <i>Mustadigana</i> 3. <i>Vacaharidradigana</i>

METHOD AND MATERIALS

Ayurvedic and modern publications, authentic websites (PubMed, Medicinal Plants, etc.), genuine magazines, literature, manuscripts, Sanskrit Dictionary, Shabdakosha, and other sources are used to compile information about *Haridra* (*Curcuma longa*).

Taxonomical classification^[7]

- Kingdom: Plantae – plants
- Subkingdom: Viridiplantae.

- Division: Tracheophyta.
- Class: Magnoliopsida.
- Order: Zingiberales.
- Family: Zingiberaceae / Scitaminae.
- Genus: Curcuma.
- Species: Longa.

Vernacular names

Persian Darzardi; French Curcuma; Gujarati Haladar; Hindi Bimb, Kanturi, kundaru, kanduri, Tirkol; English Indian saffron, turmeric; Kannada Arisina; Kokani Halad, ollodi; Marathi Haldi; Panjabi Haldar, haliya; Sanskrit Haridra; Telugu Pasupu; Urdu Haldi; Tamil Manzal; Malayam Mannal, Marinalu; German kurkuma.

Rasa panchaka^[8]

- Rasa – Tikta Katu
- Guna –Ruksha Laghu
- Vipaka –Katu
- Virya –Usna
- Dosa karma –Kapha Pitta Samaka, Pittahara Due To Tikta Rasa And Kapha Nasaka, Varnya, Twacya, Pramehahara, Sothahara, Vranahara, Kandughna, Visaghna, Krimighna, Ruci Kara, Sitapittahara.

Morphological description^[9]

Root stock is big and ovoid, and sessile tubers are thick, cylindrical, and bright yellow on the interior. Leaves have a long petiole and are oblong with a narrow base. Bracts pale green; blooms pale green, as long as bracts; blossoms during wet seasons. The plant is extensively grown in warmer parts of the world, such as India, yet it is native to South Asia.

Macroscopic & Microscopic Study^[10]

Macroscopic Study

Horny Structure, shattered surface orange to reddish brown, externally yellowish to yellowish- brown, with root scars and leaf base annulations; rhizomes oval, oblong, or pyriform (round turmeric) or cylindrical, usually short branching (long turmeric); former roughly half as wide as long, later 2-5 cm long and about 1-1.8 cm thick.

Microscopic Study

A transverse section of the rhizome reveals a few layers of cork developed under the epidermis, scattered oleo-resin cells with brownish contents, and cortex with mostly thin-walled, rounded parenchyma cells. Cork is typically composed of 4-6 layers of thin-walled, brick-shaped parenchyma cells. The epidermis has thick-walled, cubical cells of various dimensions.

Phyto-chemistry^[11]

The major chemical constituents are curcuminoids (approx.6%), the yellow colouring principles of which curcumin constitutes 50-60%; essential oil (2-7%) with high content of bisabolene derivatives. Major chemical constituents: Curcumin, desmethoxycurcumin and bisdemethoxycurcumin collectively known as curcuminoids (3-6%) are major polyphenolic compounds in turmeric rhizomes. The main colouring principle of turmeric rhizome was isolated in 19th century and named as Curcumin. Its chemical structure was determined by Roughley and Whiting (1973).

Pharmacological Activity^[12]

Curcumin, the primary active component of turmeric, is a powerful antioxidant that is comparable in strength to vitamins C, E, and beta-carotene. This makes it a popular choice among customers seeking to prevent cancer, preserve their livers, and fight aging (*Rasayana*). Numerous studies have also demonstrated that turmeric (as *Lekhaniya*) inhibits the growth of many cancer cells. Numerous studies have proven that curcumin is safe for human consumption. It has been demonstrated that turmeric reduces post-surgical inflammation (*Sothahara*). It is quite effective in mending wounds (*Vrana ropak*). It protects against respiratory tract infections (impact on *Shwasa and Kasa*). Curcumin inhibits *Helicobacter pylori*, the bacteria that causes stomach ulcers and has been linked to stomach cancer (impact on *Aruchi, Grahani and Krimi*).

Heavy metals like lead and cadmium can bind to curcumin, which reduces their toxicity (*Vishaghna*).

EKMULIKA PRAYOGA^[13]

- In disorders due to change of place (*asatmyajanya* or allergic), one should Take *Haridra* pounded with sour gruel. (vai. M 1/ 16)
- In *pandu*, One should take *Haridra* mixed with *triphala*, and honey.(Su.U.44/17)

- In thirst caused by *kapha*, one should take water processed with *Haridra* and mixed with honey and sugar.(A.S.Chi 8/81)
- *Prameha* – *Haridra* powder mixed with honey should be taken with the of *Amalaka*.(C.Chi6/26, Su.chi 11/8, A.S.Chi 14/5, A H Chi 12/5) juice
- Decoction of *Haridra* and *DaruHaridra* is specific remedy of *Pistameha*.
- In treatment of *Kushta*, *Haridra* is given with the cow's urine for a month.(Bhela samhita.Chi 6/56)
- *Sleepada*- *Haridra* mixed with Jaggery should be taken with cow urine. It destroys *Filaria* & also ring worm.(Vru,M42/24, Bha P Chi 45/14)
- *Vatarakta* – Decoction of *Haridra* & *Guduchi* mixed with honey should be taken in *Vatarakta* predominant in *kapha*.(Bh. P Chi 29/79)
- By taking *Haridra* & Jaggery in equal parts with sour gruels *ashmari* passes away. (Vangasena Ash.45)
- Cow's urine mixed with paste of *Haridra* should be taken, it destroys Scabies & Eczema (Vru.M 41/41)
- Ghee should be cooked separately with the paste of *Haridra*, *Nakuli* & *Jati*. It is efficacious in Poisoning.(A.S.U 40/127)
- Intake of ghee mixed with *Haridra*, Rocksalt & Honey is useful in poisoning by root or arrow. (Vru.M 68/18)
- *Prameha*- Fresh Rhizome juice with honey should be taken.(priya nighantu)
- In *prameha Amalaki Swarasa* and madhu mixed with *Haridra churna* should be consumed.(cha chi 6)
- *Haridra churna* and *gudayukta kanji* is effective in *sharkara meha*(vangasena) *Haridra churna* with *Gomutra* (*shodala nighantu*)
- In *Masurika*, *Haridra* is trichurated with *cincha patra* and is given with cold water (*shodala nighantu*)

CONCLUSION

This study shows that *Haridra* (turmeric) can be used to treat many health problems. According to Ayurvedic texts, it has specific taste, qualities, energy, and effects on digestion that make it very useful. *Acharya Vagbhata* says *Haridra* mainly helps balance *Pitta*, but it also supports all three doshas (*Vata*, *Pitta*, and *Kapha*). Its unique properties give it many health benefits. Overall, *Haridra* has been valued as a powerful and versatile remedy in Ayurveda since ancient times and continues to be seen as a “golden medicine” today.

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