

Ardraka & Shunti – Mahoushadhis of Ayurveda

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Abstract

Ardraka or Shunti is popular medicine spread across the tropics. The drug *Zingiber officinale* in wet form is considered as ardraka and the same in dry form is considered as shunti. Both are effectively used for treatment of Shwasa, Kasa, Agnimandhya etc and used in house hold as a spice. As both are used in wide spectrum of diseases, it is named as MAHOUSHADI by Acharyas. Shunti is a dried form of Ardraka, which has many similar properties and differs in few properties like Guna, Doshagnata and Karmukata.

This paper aims to highlight the properties of Ardraka and Shunti and to discuss the difference between these two drugs therapeutically.

Keywords

Ayurveda, Mahoushadhi, Kasa, Shwasa



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INTRODUCTION

Ardraka and Shunti (*Zingiber officinale*) are widely used across the world in foods as a spice and as herbal medicine in Chinese, Ayurvedic and Tibb-Unani practices. A majority of the Ayurvedic Lexicons admire the potential health benefits of these drugs and compared to Mahaaoushadi or Vishvabheshaja. They have a long history of use in Ayurvedic practice in the conditions like Shwasa, Kasa, Agnimandhya etc in different age groups ie from Bala avastha to Vrudha avastha. This article aims to summarize regarding the Drugs Ardraka and Shunti and their therapeutic applications.

Ardraka is delineated in Agnivesha Grhya sutra. Jaimini Brahmana quotes the name Srngabera. Suntha or Shunti described in the Guhya sutras is considered as a type of Grass but not ginger. Vishabheshaja term is used for water and rice in Rugveda. The above mentioned statement confirms that Ardraka and shunti are relatively new names not familiar in that ancient times.

Mujumdar is of the opinion that Adara described in Rigveda may be *Zingiber officinale*.

However all the main texts of Ayurveda described them extensively as it is used in the form of Ahara and Aoushadha Dravya. It

is specifically used for digestive disorders and inflammatory conditions. It is observed that shunti is considered as Vibandhahrit (alleviates constipation) but at the same time it is also indicated for atisara. Here it is important to identify that the former indication is for shunti when it is given in the powder form without anupana the later property is exhibited when administered along with takra.

Kaiyadeva described the medicinal properties of the terminal buds of rhizomes separately. It is mainly indicated in Amavata.

In varieties Ardraka Kaiyadeva described Ardra nagaram and Ardrakam (shunti) separately. Their properties are also different. According to him the former is fresh ginger while the later is dry ginger.

Botanical name¹

Zingiber officinale Roscoe

Zingiber-Derived from shrungaber

Officinale – Sold in shops or used as medicine

Family – Zingiberaceae

Kula – Haridra kula

Synonyms^{1,2}

Aushadha, Mahaushadha, Nagara, Vishva, Vishvabheshaja, Sringavera, Nagaram, Katubhadram, Uthkatam, Ooshanam, Maha

Oushadham, Vishwabheshajam, Vishva, Vishvoushadha, Vak Chatram, Katugranthi, Souparna, Kaphari, Katu Ushanam, Shoshanam, Gulmamula, Mahijam, Anupajam, Sushaakam, Rahu Chatram, Soukateshtam, Kandalam, Var am, Sourpana, Kaphari.

Vernacular names¹

Ginger : English Sheng jiang : Chinese
 Aduwa, sutho : Nepali Gember : Dutch
 Gemeiner ingber / Ingwer : German Gengibre / jengibre : Spanish
 Gingembre : French Gingimbre : Caribbean
 Imbir lekarski : Polish Jahe : Indonesian
 Khing : Thai
 Saenggang : Korean Shokyo : Japanese
 Katubhadra, Srngavera : Sanskrit
 Adarakha : Hindi
 Ada : Bengali Adu : Gujarati
 Alla, Hasishunti : Kannada Inchi : Malayalam
 Ardrak, Ale : Marathi Adi, Adrak : Punjabi
 Injee, Allam, lakottai, Inji : Tamil Allamu, Allam : Telugu
 Adrak : Urdu

Description¹

a) Macroscopic
 Rhizome, laterally compressed bearing short, flattish, ovate, oblique, branches on

upper side each having at its apex a depressed scar, pieces about 5-15 cm long, 1.5-6.5 cm wide (usually 3-4 cm) and 1-1.5 cm thick, externally buff coloured showing longitudinal striations and occasional loose fibres, fracture short, smooth, transverse surface exhibiting narrow cortex (about one-third of radius), a well-marked endodermis and a wide stele showing numerous scattered fibro-vascular bundles and yellow secreting cells, odour agreeable and aromatic, taste, agreeable and pungent.

b) Microscopic

Transverse section of rhizome shows cortex of isodiametric thin-walled parenchyma with scattered vascular strands and numerous isodiametric idioblasts, about 40-80 μ in diameter containing a yellowish to reddish-brown oleo-resin, endodermis slightly thick walled, free from starch immediately inside endodermis a row of nearly continuous collateral bundles usually without fibres stele of thin-walled, parenchyma cells, arranged radially around numerous scattered, collateral vascular bundles, each consisting of a few unligified, reticulate or spiral vessels upto about 70 μ in diameter, a group of phloem cells, unligified, thin-walled, septate fibres upto about 30 μ wide and 600 μ long with small

oblique slit, like pits, present, numerous scattered idioblasts, similar those of cortex, and associated with vascular bundles, also present, idioblasts about 8-20 μ wide and up to 130 μ long with dark reddish-brown contents: in single or in axial rows, adjacent to vessels, present, parenchyma of cortex and stele packed with flattened, rectangular, ovate, starch grains, mostly 5-15 μ - 30-60 μ long about 25 μ wide and 7 μ thick, marked by five transverse striations.

Chemical constituents¹

Essential oil (volatile oil 2-3 %), resin, starch, pungent constituents (gingerol and shogaol), resinous matter and starch, Heptane, octane, isovaleraldehyde, nonalol, ethyl pinene, camphene, β -phellandrene, 1,8-cineole, μ -curcmenene, α -farnesene, β -farnesene, linalool, β sesquiphellandrene, gingerol, zingerone, shobal, dihydrogingerol, hexahydrocurcumin, geranyl acetate (essential oil from rhizomes), dehydrogingerdione, gingerdione, gingerol, aspartic acid, threonine, serine, glycine, cysteine, valine, isoleucine, leucine, arginine (aerial parts and tuber), **Ginger oil contains:** Monoterpene hydrocarbons, sesquiterpene hydrocarbons

, oxygenated mono and sesquiterpene phenyl propanoids.

Phytochemical composition

Essential oils, phenolic compounds, flavonoids, carbohydrates, proteins, alkaloids, glycosides, saponins, steroids, terpenoids and tannin as the major phytochemical groups.

Bhava prakasha-also explains about chemical constituents. (Hareetakyadi varga)

- 2-3%-Volatile oil
- Gingerol, Shogal-Responsible for Katu rasa of Dravya
- More resin and starch is present
- Alcohol soluble extracts-4.5%
- Water soluble extracts-10% (In Shunti-2.7%)

Identity, purity and strength²

Foreign matter not more than 1 per cent

Total Ash not more than 6 per cent

Acid-insoluble ash not more than 1.5 per cent

Alcohol-soluble extractive not less than 3 per cent

- Water-soluble extractive not less than 10 per cent

Classification

Taxonomical classification²

- Kingdom: Plantae
- Class: Monocotyledons

- Series: epigynae
- Family: Scitaminae
- Genus: Zingiber
- Species: officinale

Commercial Classification

- Jamaikan
- Indian Cochin, Kalicut, Calcutta
- African
- Chinese
- Japanese

GRANTHA	VARGA
Charaka Samhitha ³	Triptighna varga, Arsoghna varga, Deepaniya varga, Sula Prashamana, Sheeta Prashamana, Trishna nigravana, Sthanya shodhana
Sushruta Samhitha ⁴	Pippalyadi gana, Trikatu
Vagbhatta Samhitha ⁵	Ardraka-Shaka varga Shunti-Aoushadha varga
Bhavaprakasa Nighantu ⁶	Harithakyadi varga
Madanapala Nighantu ⁷	Shuntyadi varga
Raja Nighantu ⁸	Pipplyadi, Mishrakadi varga
Kaiyadeva Nighantu ⁹	Pipalyadi

Distribution

It is a tropical plant and highly adapted to grow in sub-tropical areas also. Ardraka grows well in warm and humid conditions from sea level up to 1500 m above MSL. The plant is cultivated in China, Nepal, US, India, Bangladesh, Taiwan, Jamaica, Nigeria

and some other parts of world. India is the biggest producer of Ardraka in the world. In India, it is been cultivated in almost all the states. Some reports suggests that the climate conditions of Orissa, West Bengal, North Eastern states and Kerala are more suitable for the growth of Ardraka in India.

Rasa panchaka

RASA PANCHAKA	ARDRAKA	SHUNTI
Rasa	Katu Tikta, madhura, na pitta krut (Ashtanga Hrudaya)	Katu Pittalam (Kaiyade va nighantu)
Guna	Ruksha, Teekshna	Laghu, Snighdha
Veerya	Ushna	Ushna
Vipaka	Madhura	Madhura
Karma	Bhedani, Deepani	Amavatagni, Ruchya, Pachani, Vibandanuth, Vrus hya, Swarya
Doshgnatha	Vata Kaphapaha	Kapha vatanuth

Karma-Deepani, Bhedini, Ruchyam, jihwa kanta vishidhanam, Anulomana, Hrudya, Pachana, Ashmadoshahara, Vrishya, Swarya, Kasahara, Swasahara, Sulahara, Grahi, Ruchya, Hradya, Vibandahara, Sheeta Prashamana, Shotha Hara, Vedana Sthapana, Nadi Uttejaka, Rochana, Triptighna, Vatanulomana, Shoola Prashamana, Arshoghna, Bhedana, Grahi, Hridya, Svarya, Sleshma Hara,

Swasahara, Vrishya, Uttejaka, Jwaraghna(data base)

Doshagnatha-Vata Kaphapaha

Rogagnatha-

Agnimandya, Svasa, Adhmana, Amavata, Pandu, Udararoga, Chardi, Vibandha, Sandhi Shotha, Saitya, Avasada, Shotha, Vata Vyadhi, Kati Shoola, Aruchi, Hrillasa, Agni Mandya, Ajeerna, Koshta Vata, Grahani, Gulma, Udara Shoola, Anaha, Arsha, Hrid Dourbalya, Hrid Roga, Sleepada, Sheetapitha, Kanta Roga, Kasa, Hikka, Pratishyaya, Kshata Ksheena, Vishama Jwara, Jeerna Jwara, Samanya Dourbalya, Prasavottara Dourbalya, Jeerna Sandhi Vata, Shira Shoola, Vata Nadi Shoola, Pratishyaya, Kasa, Swasa, Arsha, Atisara, Gulma Shotha, Prameha, Swara Bhangha, Karna Shoola. It is useful in fever, dropsy, otalgia, cephalgia, asthma, jaundice, cough, hiccough, colic, diarrhoea, flatulence, anorexia, dyspepsia, piles, cardiac disorders, diseases of pharynx, hyper acidity, abdominal pain, vomiting, elephantiasis, inflammation, rheumatoid arthritis. It is prescribed as an adjuvant to many tonic and stimulating remedies.

Amayika prayoga

- Sada pathya in bojanagrae, Lavana ardraka Bhakshanam for agni deepana

- Shwasa, Kasa-Ardraka rasa along with madhu

- Chardi-Ardraka rasa with Palandu rasa

- Jalodara-Ardraka rasa

- Sheetapitta- Ardraka rasa with guda

- Karna Shula-Ardraka rasa(warm) karnapurana

- Shira Shula, Danta Shula-Lepa of Shunti Churna

- Excess sweating in Pani Pada- Rubbing of Shunti Churna

- Ama Dosha(Ama atisara)-Mix with Ghruta-make Kalka-cover with Patra and Putapaka is given. Intake along with Mishri in early morning.

- Jeerna Sandhivata-Panta prepared out of Shunti (Rathri sevana)

- Arsha, Ajeerna, Atisara, Gulma-Shunti + Guda

Ayogya

- Purana Hrudroga

- Purana Vrukka roga

Matra

Ardraka-2.5-10ml

Shunti-250-1000mg

DISCUSSION

Shunti is a dried form of Ardraka, which has many similar properties and differs in Guna, Doshagnata and Karma. Shunti is

prepared by drying Ardraka (Pealed). Dravya guna vijna explains that Shunti and Ardraka are different species. And Kaiyadeva mentions Ardra nagaram and Ardraka separately, among these Shunti is prepared from Ardra nagaram.

Peyu (*Zingiber cassumunar*) is also one more variety of Ardraka identified by Nadkarani and introduced by Narahari, which is also called as Vanardraka. The properties are similar to Ardraka except rasa i.e. Katu and Amla.

Dhanvantara nighantu describes Shunti as Vrushya and has influence on Pandu. Whereas in Raja nighantu, Shunti is not mentioned as Vrushya.

In the fresh ginger rhizome, the gingerols were identified as the major active components. The pungency of ginger is due to gingerols and shogaols. The powdered rhizome contains 3-6% fatty oil, 9% protein, 60-70% carbohydrates, 3-8% crude fiber, about 8% ash, 9-12% water and 2-3% volatile oil.¹⁰

Many research works have been evident for further understanding of its pharmaceutical action. Such as, carminative, antipyretic, anti colic, and for the treatment of waist pain, rheumatism, cough, corhyza and bronchitis.

It is very useful in the treatment of gastrointestinal disorders particularly dyspepsia etc.

- Anti-inflammatory and Anti rheumatism¹¹

One of the mechanisms by which ginger exerts its ameliorative effects could be related to inhibition of prostaglandin and leukotriene biosynthesis

- Blood clotting activity¹²

Ardraka administered orally caused significant changes in the serum PGE2 significantly. TXB2 was reduced when examined in rats (500mg/kg) which shows that it has anti thrombic action.

- Effects on Blood pressure¹³

It has been found that the dose (0.3-3mg/kg) of ginger showed fall of arterial blood pressure in rats. And in guinea pigs it resulted as a cardio depressant agent¹⁴.

- Anti cancerous¹⁵

In-vitro studies have proved that apoptosis of A549 cells were carried out by ginger extract.

- Anti osteoarthritis¹⁶

Ardraka extracts are showing moderate effect in osteoarthritis.

- Anti-oxidant action¹⁷

The antioxidant properties of [6]-gingerol which is very effective agent for anticipation of UV-induced skin disorders, has been studied both in-vitro & in-vivo. It also has a protective role to toxicity and lethality against some agent like carbon-tetra chloride.

- Hepatoprotective Activity¹⁸

Ginger acts as best hepato protective drug especially bromobenzene induced hepatic disorders

- Action on lungs¹⁹

A Comparative Study was conducted in rats to know the drug penetration with using ginger and without using ginger as adjuvant. Ginger enhanced the penetration of ciprofloxacin and Isoniazid into the lung tissues; however, their rates of penetration were delayed.

In Ayurvedic practice it has been used for different purposes such as Rasa dravyas like gairika, manashila Shodhana, Marana etc.

And it is used as Anupana where the drug should reach Kapha vata Sthana.

Eventhough Ardraka is commonly used in the form of swarasa, a study has been done in the form Arka used as nebulizer in Tamakashwasa. It showed mild to moderate condition is of utmost benefit to the patient, as it reduces the chest tightness along with

good expectoration and a reduction the intensity of ronchi²⁰

CONCLUSION

Ardraka is having Katu rasa (A.H-Tikta, Madhura), Teekshna, Ruksha Guna, Ushna veerya and Madhura Vipaka, thus pacifies Vata, Kapha dosha without aggravating pitta. Shunti is having Katu rasa, Snigdha guna, Ushna veerya and madhura vipaka, pacifies kapha Vata Doshas but aggravates pitta dosha. Even though Shunti is dried form of Ardraka, due to Samskara their property differs. To conclude, Shunti cannot be used in Ushna kala, Pitta udrikta conditions where Daha, Chosha lakshanas are noticed, Whereas Ardraka can be used. These are two drugs which are used widely in many formulations such as Trikatu, Soubhagya Shunti, Ardraka Ghrutam, Avipathikara Churna etc due to its Agni deepana property and easy availability. It can cure almost all diseases (Rogaha Sarvebhyo Mandagnou).

As the name indicates it acts as Vishvabhehsaja in the stream of Ayurveda and allied sciences, which helps promote Universal health.

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