

The Role of Karkatshringi in Kasa Vyadhi-Conceptual Study

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Date of Submission: 20-09-2024

Date of Acceptance: 30-09-2024

ABSTRACT

In Ayurveda, the well-known medicinal herb karkatshringi is used. Insects cause the gall-like excrescences on the plant Pistacia integerrima Steud. ex Brandis, which grows on the Western Himalayan steps from Indus to Kumaon. The plant possessing qualities similar to those of Katu Vipak, Tikta Rasa, Laghu, Ruksha Guna, and Ushna Virya. It possesses qualities of Kaphavata Shamaka. Obstructed Vata and Kapha Dosha cause Kasa. Thus, Karkatshringi will be ideal for treating Kasa's condition. Karkatshringi has additional antiviral, antifungal, antibacterial, and antiparasitic qualities. Since the galls have the most health benefits of all the parts, they are more frequently used in folk medicines. Karkatshringi has so been chosen for this paper.

KEY WORDS: Karkatshringi, Kasa, Kpha, Vata, Bronchodilator

I. INTRODUCTION -

The natural medical system known as Ayurveda has its roots in India and dates back over 3,000 years. The Sanskrit words Ayur (life) and Veda (science or knowledge) are the source of the term Ayurveda¹. Most people have experienced coughing fits at some point in their lives. Ayurveda refers to a disease called Kasa, which encompasses the majority of respiratory tract disease presentations. The term "cough" or "kasa" refers to the act of coughing in Ayurveda. Kasa is both a symptom and disease which is caused by various factors such as smoke entering the mouth, nose, throat etc, Exposure to dust, Excessive exercise, Excessive consumption of dry foods Entry of food particles into the Respiratory passages, Forcibly stopping the natural urges of the body, especially that of cough and sneeze². In the pathogenesis of diseases Kasa occurs when Apana Vayu is obstructed resulting in an increase in upward motion. Vitiating of Udana Vayu propels the air upward and out of the body. Vata may however lodge in the chest, back, or head resulting in pain and repeated coughing³. Early intervention is necessary in case of Kasa as it is a potential

Nidanarthakara Vyadhi (disease having tendency to produce secondary diseases) to produce Kshaya⁴ (a disease characterized with severe emaciation). Ayurveda has many drugs that act on complaints of respiratory system in which Karkatshringi is one of them.

Pistacia integerrima, also known as karkatshringi, is a well-known medicinal plant in the Anacardiaceae family. This plant, also known as crab's claws in English, is indigenous to India and is primarily found between 500 and 2500 meters above sea level in the Himalayas. Karkatshringi is a plant whose parts have all been extensively described for their medicinal qualities in Ayurveda due to the presence of numerous significant phytoconstituents that have enormous healing potential. The plant's various sections, such as the leaves, bark, roots, and galls, are packed with potent metabolites—substances that the body uses to break down food particles. The bark and root of this plant contain terpenoids and flavonoids. Terpenoids have been found to be useful in the prevention and therapy of several diseases. Karkatshringi also consists of antimicrobial, antifungal, antiparasitic, and antiviral properties. Among all the parts, the galls are more used in folk medicines as they contain many health benefits. Therefore Karkatshringi has been selected for this paper⁵.

AIM -To study the role of Karkatshringi in Kasa Vyadhi.

Karkatshringi –

Botanical Name- Pistacia integerrima steud ex Brandis⁶

Family- Anacardiaceae

Synonyms - Kakkashingi, Kakarsingi, Kakra, Kakkatasimgi. Kangar Masna, Sumak, Tungu, Tanbari, Shne, Karkarshingi

Review of literature

Gana (Classical Categorization):

• Charak Samhita -

Kasahara (group of herbs for treatment of cough).

Hikkanigrahana (group of herbs for treatment of hiccups).

Madhura skanda

- Sushrut Samhita -

Kakolyadi

Padmakadi

- Bhavprakasha Nighantu :
- Haritakyadi

Vernacular names-Table 01

Sanskrit name	Srngi, karkat srngi, kulir vishanika, ajsringi, chakra and karkatakhya
English name	Crabsclaw, Zebrawood
Hindi name	Kakadasrangi, kakarasingi
Kannada name	Kakadashrungi, karkataka shrungi
Tamil name	Karkata shrungi
Bengali name	Kankihasringi
Punjabi name	Kakar, kakarsingi
Urdu name	Kakarasinghi

Rasa	Tikta (bitter), Kshaya (astringent)
Guna	– Laghu (light), Ruksa (dry)
Virya	– Ushna (hot potency)
Vipaka	– Katu (pungent)

Ayurvedic properties-Table 02

Botanical Description- Karkatshringi is a glabrous tree having dark grey or blackish bark and grown upto 16m. The bark produces scented liquid when pierced. Leaves are 20-25 cm in length, with or without terminal leaflet. The odor of this shrub is peculiar. Flowers are small, green- yellow in colour. Fruit are drupe, globose, dry, rugose. Flowering occurs in Jan – Feb., Fruits during March – April.

Distribution-North-west Himalayas(Indus to Kumaon)at 350- 2500m;cultivated in Punjab Plains⁸.

Chemical Constituents⁹

Gall: Chiefly, it contains resin, two isomeric triterpenic acids (pistacienoic acids A and B), tannins, a triterpene alcohol (tirucalol), beta-sitosterol, tetracyclic triterpenes, pistacigerrimones A,B,C

Seed: Alpha-piene, beta-piene, DL-limonene, 1:8-cinol, alpha-terpineol, beta-terpineol.

Aromadendrin, lactic stearoptene, caprylic acid, alpha-d-pinene, alpha and beta-phallandrene, amino acids, dihydromalylic acid, protein.

Seed oil: Hydrocarbons, sterols, triterpenoids.

Leaves, bark: Tannins

Karma – Kasahara (antitussive), Hikka-Nighrana (anti-hiccough), Vatahara, Vrushya (aphrodisiac), Grahi (absorbent), Deepana (appetiser), Jwaraghna (antipyretics), Balya (physical strength promoter), kaphanissaraka (expectorant), Shothahara (swelling reducing), Raktarodhaka (checks bleeding), and Vatanulomana (carminative) are the principal actions of Karkatashringi. P. integerrima galls have an aromatic, bitter flavour and are used as both a tonic and an expectorant¹¹.

Indications - It is primarily used in the following cases: Urdwavata, Kaphavata (diseases of Kaphavata), Atisara (diarrhoea), Raktapitta (bleeding disorder), Arti (pain), Chhardi (vomiting), Trishna (thirst), Aruchi (anorexia), and Kasa (cough). These galls are beneficial in vitiated conditions of Tridosha, dyspepsia, inflammation, pharyngitis, leucorrhoea, ulcers, bronchitis, fever, irritability of the stomach, leprosy, psoriasis, and skin diseases. When teething occurs in children, it is also very beneficial. Hepatitis and liver disease are treated in Pakistan with the galls of the Karkatshringi plant. In Pakistan's northern regions, roasted galls are taken with honey to treat diarrhoea and cough (Abbasi et al 2010)¹¹.

Pharmacological Action¹¹-

Significant analgesic, anti-inflammatory, antimicrobial, antioxidant, antispasmodic, carminative, antiamoebic, antigastrointestinal motility effect, and antihelminthic properties have been reported for P. integerrima galls. Antinociceptive, depressant, and hyperuricemic effect disorder have all been reported. It has also been reported that P. integerrima galls reduce mice's uric acid levels in a dose-dependent way.

Anti-asthmatic Activity: Pistacia integerrima shows Anti-asthmatic activity, inhibition of histamine release, and 5-lipoxygenase activity. Bronchial asthma is due to the contraction of smooth muscle in response to multiple stimuli resulting in the release of chemical mediators like Ach and citric acid. Pistacia integerrima acts as an expectorant and helps in the clearance of mucus from airways, lungs, bronchi, and trachea. It is also used quite well in whooping cough in children. It also manages the hiccough. In Unani system of medicine, karkatshringi is used in combination as

well as single formulation. Unani physicians have been treating asthma disease for thousands of years. It is known to help in cough and asthma and it gives strength to mucus membrane. The essential oil of *Pistacia integerrima* (EOPI) contains tetracyclic triterpenoids and can be effective in an animal model in bronchial asthma for acute and chronic inflammatory conditions. In-vivo study of the essential oil of *Pistacia integerrima* on rats shows improvement of LPS- induced lung inflammation (neutrophilia), containing inhibition of protein level. While *Pistacia integerrima* essential oil inhibits 5-lipoxygenase, L-type voltage-gated Ca channel, and DPPH oxidation in an in-vitro research on guinea pig ileum. The aqueous extract of *Pistacia integerrima* exhibits antiasthmatic activity by stabilizing the mesenteric mast cell membrane. In-vitro study of *Pistacia integerrima* in aqueous extract acts as bronchoconstrictor by inducing histamine in the guinea pigs¹².

II. DISCUSSION-

Karkatshringi, a deciduous tree belonging to the Anacardiaceae family, is scientifically known as *Pistacia integerrima*. It is a horn-shaped gall called a karkatshring that can be found 350–2500 meters above sea level in the North and West Himalayas. The typical insect species *Dasia aedifactor* forms the galls on the Karkatshringi tree by sucking the juice from the leaves. In the Pakistani region, the galls of the Karkatshringi are used to treat liver disease and hepatitis.

Both Acharya Charaka and Acharya Sushruta viewed the tree as a poison with a vegetative origin in the traditional Ayurvedic writings. This medication causes heat, is astringent, and has a harsh taste. This medication treats Vata, Kapha, wasting disorders, fevers, dyspnea, obstructed breathing, thirst, cough, Hiccough, and loss of taste. Karkatshringi contains tannins, terpenoids, flavonoids, etc due to which it exhibits anti- pyretic, anti-microbial, anti-depressant, anti-inflammatory activity, carminative, etc¹³.

Kasa is associated with Vata Dosha, which becomes more intense in the body and blocks all the channels. The Vishesh qualities of Dravya, which have Ushna-Virya, must be used to overcome this Vata Dosha. Dravya Karkatshringi possesses all the qualities necessary to keep this Vata Dosha in balance. Vata is dominated by Vayu Mahabhuta and comprises Laghu, Ruksha, Sheet, Chal, and Guna. As a result, we are able to prescribe this drug in Kasa Roga. This Kasa Roga

remedy was also endorsed by several Acharyas, either alone or in combination with other Dravyas. Karkatshringi gall, an effective expectorant, aids in liquifying thick mucus that has built up in the airways, making it simple to expel out. Its possible bronchodilatory effects open up congested airways, enhance airflow to the lungs, promote easy breathing, and widen the respiratory airways. In addition to treating upper and lower respiratory tract infections, karkatshringi boosts general immunity, protecting the body from recurring illnesses including allergies, sinus infections, and coughs and colds. Nature has bestowed the Karkatshringi plant with Tikta and Kashaya Rasa, Laghu, Ruksha Guna, Ushna Virya and Katu Vipaka properties. This potent herb's hot and bitter properties help to balance the Vata and Kapha Doshas in the body, preventing the development of many diseases¹⁴.

Probable mode of Action of karkatshringi- Certain medications, like Kashaya Rasa and Karkatshringi, have a localised Kaphahara effect on the mucosa. This procedure explains why Kasa relieves symptoms. Systemic antiviral and antimicrobial properties of karkatshringi aid in the management of systemic infections originating from various sources¹⁵. The study shows that *Pistacia integerrima* Stewart ex Brandis galls work well in Kasa Roga.

III. CONCLUSION-

Strong and packed with nutrients, *Pistacia integerrima* contains beta-sitosterol, pistacienuic acids A and B, tannins, pistacigerrimones, alpha-pi-ene, and terpineol. Certain substances, such as aromadendrin, lactonic stearoptene, caprylic acid, hydrocarbons, sterols, triterpenoids, etc., can be used to treat fever, vomiting, diarrhoea, and colds. Karkatshringi has all the necessary elements to sustain this Vata Dosha, including Laghu, Ruksha Guna, Kasaya, Tikta Rasa, Ushna-Virya, Katu-Vipaka, and Dravya Karkatshringi. The pharmacological properties, immunomodulation and anti- microbial action activates action of kaphahara and Vatahara as described in Ayurveda. Hence we can recommend this drug in Kasa Roga. Many Acharya's also recommended this in Kasa Roga either in single form or with the combination of other Dravyas.

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