



KASAMARDA (*SENNA OCCIDENTALIS* LINN): AYURVEDIC APPROACH

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ABSTRACT

India has an ancient history of the use of plants in the indigenous system of medicine dating back to over 5000 years. It has been estimated that over 8000 plants are used in traditional, folk and herbal medicine, *Senna occidentalis* Linn (Caesalpiniaceae), a perennial plant of southern India, is an Ayurvedic plant which is used in several traditional medicines to cure various diseases. The parts of the plant used are roots, leaves and seeds. Leaves of *S. occidentalis* plant have ethno medicinal importance like paste of leaves is externally applied on healing wounds, sores, itch, cutaneous diseases, bone fracture, ringworm, skin diseases and throat infection.

The plant is used for fever, menstrual problems, tuberculosis, diuretic anaemic, liver complaints, and as a tonic for general weakness and illness and is also reported to cure leprosy. An infusion of the plant bark is given by the folklore in diabetes. Hence this paper is an attempt to bring this effective drug to lime light by describing palliative, therapeutic and other uses of *Senna occidentalis* Linn.

Keywords - *Senna occidentalis*, ethno medicinal importance, leprosy, diabetes, liver tonic

INTRODUCTION

Senna (from Arabic *sana*) is a large genus of around 250 species of flowering plants in the family Leguminosae and sub family Caesalpiniaceae. It is known as 'Negro Coffee' or Striking weed in English, Kasondi in Hindi. The parts of the plant used are roots, leaves and seeds. The leaves are paripinnately compound, the leaflets opposite, often with globose to clavate or cylindrical glands on the petiole and or the rachis. Flowers are in few too many flowered racemes, pedicels without bracteoles. The fruit is a legume.

Senna species make good ornamental plants and are used for landscape gardening. As for uses in medicine, *Senna* is currently used in medicine as a laxative (Spiller *et al.*, 2003), acts as purgatives and is similar to aloe and rhubarb in having active ingredients as anthraquinone derivatives and their glycosides.

Kasamarda is an herb which grows up to 2 m and possesses yellow flowers. It is found all over India on road sides as weed. Though Charaka omitted it among the ganas, Sushruta and Vagbhata have included it under Sursadigana. Vagbhata denoted it with a synonym kasaghna. The drug Kasamarda is used in the indigenous system of medicine since long time. Charak mentioned its use for curing cough. It has been mentioned in various nighantus viz. Rajnighantu, Dhanwantari, bhavaprakasha, Rajballabha and others as bitter, sweet light, hot, Appetiser, aphrodisiac, stomachic and diuretic.¹

Morphology²

Root - tap root measures 15-25cm. in length and 1-15 cm. in diameter, at the upper extremity they are cylindrical and tapering, bearing the few lateral branches and many rootless. Surface is rough due to presence of many transversely running lenticels and a few root scars of fallen roots. It is dark brown in colour externally and creamy internally. Fracture is hard and fibrous. The root possesses characteristic odour and acrid taste.

Stem - erect, 1-2 metres long, 0.5-1.5 cm. Thickness at its basal region, branching at nodes spirally. Young stem is green in colour and furrowed, while the mature stem is light brown to dark in colour. Branches many, ascending, flexuose, smooth, showing dark purplish green colour on their surface. The internode is 2-4 cm. Long.

Leaves - Compound, pinnate, 9-13-20cm. Long, petiolate, petiole (rachis) pulvinate, grooved or nearly round, glabrous, 5-12cm. Long, showing dark purplish colour in the grooved portion and greenish on the opposite side.

Leaflets - 3-5 pairs, opposite, unequal, the lower most smallest and ovate, the superior ones longer, 2.5-8cm. Broad, very short stalk, ovate, oblong to ovate, lanceolate, acute or acuminate, base usually rounded and somewhat oblique, glabrous above and pubescent beneath. The leaves possess a very foetid odour.

Flower - Yellow with 1 to 2 cm. Diameter, inflorescence Racemes few -flowered, axillary, and also forming terminal panicle; bracts caduceous.

Fruit - Flat pods 10-12cm. long with 10-30 seeds. Areolate seeds are pointed at end and blunt at the other. Flowering in sharad and fruition in Hemanta ritu.

Distribution³

The plant is found throughout India from the Himalayas to Kanyakumari. The plant spring up abundantly after the rains nearly everywhere on waste lands as well as rubbish heaps. Though a very common plant and found growing in almost all places, it is not considered truly indigenous by some authorities. It is also opined as introduced from America.

Cultivation: Since it is found growing wild throughout the India, so cultivation is not required.

Chemical composition⁴

Oxymethylanthraquinones, emodin taxalbumin, tannic acid, fatty oil are present, Ehryarobin, Aminoacids-alanine, aspartic acid, glutamic acid, glycine, histadine, isoleucine, leucine, cysteine, cystine, lysine, threonine, rhein, aloemodin and chrysophanol.

Extractives of *C. occidentalis* furnished in addition to emodin and physcion, two unidentified pigments having m.p. 214-216⁰ and 243-245⁰, chrysophanol, α -3-sitosterol, and a new xanthone, cassiollin, identified as 1,7-dihydroxy-5-methoxy-carbonyl 1-3 methylxanthone. Futher prakash has reported the presence of four nitrogenous bases- betaine, choline, stachydrine and trigonelline.

Flower - physcion, emodine, physcion 1 β -D-glucopyranoside and β -sitosterol.

Kinds and varieties-⁵

Another species is *Cassia sophera*. The plant and its leaves and flowers are also bigger. Remarkably the glands on petioleis not swollen. Branches are purplish (twigs). Root bark is black that appears to be somewhat burnt; it smell like musk.

Pharmacodynamics-⁶

Rasa - Tikta, madhura

Virya - Ushna

Vipaka - Katu

Guna - Laghu, Ruksha, Tikshna

Dosha karma - Kaphavatashamaka, Pittasaraka

Rogagnata - Kasa, swasa, Ajeerna, Visha, raktavikara, Twakvikar

Karma - Vrishya, Rochana, Pachana, grahi, Kantyasodhana, Krimighna

Classical category

Sushruta - Surasadigana

Vagbhata - Surasadigana

Dhanvantari nighantu - Karaviradi varga

Bhavprakash - Shakavarga

Kaiyadev Nighantu - Aaushadhi Varga

Raj nighantu - Satahvadi varga

Nighantu Adarsha - Putikaranjadi varga

Properties and uses -⁷

Karm - kasaghna, mutrala, kusthaghna, jvaraghna, visaghna, aksepasamana, vedanasthapana Dipana, vatanulomana, pittasaraka, rechana

Rog - kasa, swasa, hikka, kukkurakasa, agnimandya, udararoga, pittavikara vibandha, apasmara, apatantraka, akshepaka, kusta, visharpa, shlipada, vana, dadru, charmavikara, mutrakrchra, ikshumeha

Its root has diuretic, panchang has virechaka, leaf and seed has antipyretic property.⁸

Uses Described in Ayurveda

हिक्काश्वासयो

कासमर्दकपत्राणां यूषः शोभाञ्जनस्य च । शुष्कमूलकयूषश्च हिक्काश्वासनिवारणः ॥

चहाराका समहति च्चकितिसा १७९९

कासे

कासमर्दाश्वविद्भृंगराजवार्ताकजो रसः । सक्षौद्रः कफकासघ्नः सुरसस्यासितस्य च ॥

चहाराका समहति च्चकितिसा १८-११७ ॥

विचर्चिकायाम्

जम्बीरस्वरसे पिष्टिकासमर्दाङ्गिलेपनम् । विचर्चिकानां सर्वेषां परमौषधमुच्यते ॥

वदिद्या मानखरामा । ११-५४४६ ॥२६६

वातज्वलीपदे

कासमर्दाशिफाकल्कं गव्येननाज्येन यः पिबेत् । श्लीपदं वातजं तस्य नाशमायाति सत्वरम् ॥

वनगासेना । स्थलपिपादा १०

वृश्चिकदंशे

यः कासमर्दमूलं वदने प्रक्षिप्य कर्णं फूत्कारम् । मनुजो दधाति शीघ्रं विषं वृश्चिकानां सः ॥

च्चाकरादातता । वसिहाच्चकितिसा । २० ॥ वनदामादाहावा ६८-१७ ॥

दद्वुकिट्टिभकुष्ठेषु कासमर्दप्रलेपः

कासमर्दकमूलञ्च सौवीरिणं च पेपितम् । दद्वुकिट्टिभकुष्ठानि जयेदेतत् प्रलेपनात् ॥

वनदामादाहावा ४९-११ ॥ वनगासेना जुसतहा ६१ ॥

सिध्मकुष्ठे कासमर्दप्रदेहः

कासमर्दकवीजानि मूलकानां तथैव च । गन्धपाषाणमिश्राणि सिध्मानां परमौषधम् ॥

च्चाकरादातता । जुसतहा च्चकितिसा । ५०-२८ ॥ वनदामादाहावा ५१-१९

Pharmacological Activity

- Antibacterial^{9, 10}
- Antimalarial¹¹
- Antimutagenic¹²⁻¹³
- Antiplasmodial¹⁴
- Anticarcinogenic¹⁵
- Hepatoprotective¹⁶
- Anti-allergy, Anti-inflammatory, Anti-lipid peroxidation¹⁷
- Analgesic and antipyretic activity¹⁸
- Antihyperglycemic¹⁹

Uses of Folklore

- Fever - 1/2 tsp. Kasondi seed powder should be taken with wine twice daily give relief in three days.
- Cough - 2 tsp. Juice of kasondi leaves mix with honey and taken twice gives relief from cough.
- Intestinal gas - 1/2 cup kasondi panchang decoction should be taken twice daily it gives relief and help to bowel clear.
- Skin disease - Pasted kasondi leaves should be applied on affected area show benefit in few days.


Benefits and Detriments - As the name implies, the seeds of coffee senna are roasted and used as a coffee substitute. The plant's tissues contain a host of phytoactive chemicals that may support its numerous applications in folk medicine. Extracts or powdered leaves are used as an analgesic, antibacterial, anti-hepatotoxic, antifungal, anti-inflammatory, antiseptic, antispasmodic, antiparasitic, antiviral, carminative, diaphoretic, emmenagogue, febrifuge, insecticidal, immunostimulant, laxative, purgative, sudorific, and vermifuge. Several of these effects have been demonstrated in laboratory and clinical tests. While coffee senna can be a weed of cultivated fields and plantations, it is principally a problem because it accumulates in heavily grazed pastures. The foliage is poisonous and generally avoided by livestock. Ingestion of large amounts of seeds has been implicated in deaths of cows, horses, and goats. Poisoning of pigs fed coffee senna seeds resulted in muscle necrosis.²⁰

CONCLUSION

Senna occidentalis Linn (*Caesalpiniaceae*), a perennial plant of southern India, is an ayurvedic plant which is used in several traditional medicines to cure various diseases. It is used for fever, menstrual problems, tuberculosis, diuretic anaemic, liver complaints, and as a tonic for general weakness and illness and is also reported to cure leprosy. An infusion of the plant bark is given by the folklore in diabetes. Hence in this paper palliative, therapeutic and other uses of *Senna occidentalis* Linn were explained.

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