KASAMARDA (SENASA OCCIDENTALIS LINN): AYURVEDIC APPROACH

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DOI: 10.7897/2277-4572.02214
Published by Moksha Publishing House. Website www.mokshaph.com
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Received on: 15/03/13 Revised on: 20/04/13 Accepted on: 27/04/13

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 anemic, 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 Caesalpiniaeae. It is known as ‘Negro Coffee’ or Strinking 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 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 a 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 Vagbhatta have included it under Sursadigana. Vagbhatta denoted it with a synonym kasaghma. 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, Dhanwantrai, 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.

Leaflet s - 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 caduceus.

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 composition
Oxymethylenanthraquinones, emodin taxalbumin, tannic acid, fatty oil are present, Ehryarobin, Aminoacids-alanine, aspartic acid, glutamic acid, glycine, histidine, isoleucine, leucine, cysteine, cystine, lysine, threonine, rhein, aloe-emodin and chrysophanol.

Extractives of C. occidentalis furnished in addition to emodin and physicin, two unidentified pigments having m.p. 214-216° and 243-245°, chrysophanol, α-3-sitosterol, and a new xanthone, cassiollin, identified as 1,7-dihydroxy-5-methoxy-carbonyl 1-3 methylxanthone. Further prakash has reported the presence of four nitrogenous bases- betaine, choline, stachydrine and trigonelline.

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

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

Pharmacodynamics
Rasa - Tikta, madhura
Virya - Ushna
Vipaka - Katu
Guna - Laghu, Ruksha, Tikshna
Doshaya karma - Kaphavatashamaka, Pittasara
Rogaghrna - Kasa, swasa, Ajeerna, Visha, raktvikara, Twakvikar
Karma - Vrishya, Rochana, Pachana, grahi, Kantyasodhana, Krimighna

Classical category
Sushruta - Surasadigana
Vagbhata - Surasadigana
Dhanvantari nighantu - Karaviradi varga
Bhavprakash - Shakavarga
Kaiyade Nighantu - Aashadhi Varga
Raj nighantu - Sattahvadi Varga
Nighantu Adarsha - Putikaranjadi varga

Properties and uses
Karm - kasaghna, mutrala, kustaghna, jvaragrhna, visaghna, aksepasamana, vedanasthapana Dipana, vatanulomana, pittasara, rechana
Rog - kasa, swasa, hiika, kukkurakasa, agnimandy, udararoga, pittavikara vibhandha, apasmara, apanatraka, askepaka, kustha, visharpa, shlipad, vrana, dadru, charmvikara, mutrakrcha, ikshumeha
Its root has diuretic, panchang has virechaka, leaf and seed has antipyretic property.

Uses Described in Ayurveda

Pharmacological Activity
- Antibacterial
- Antimalarial
- Antimutagenic
- Antiplasmodial
- Anticarcinogenic
- Hepatoprotective
- Anti-allergy, Anti-inflammatory, Anti-lipid peroxidation
- Analgesic and antipyretic activity
- Antihyperglycemic

Uses of Folklore
- Fever - ½ 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 - ½ 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, 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.
CONCLUSION

*Senna occidentalis* Linn (*Caesalpinia*ae), 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, diarrhoea, anemia, liver complaints, and as a tonic for general weakness and illness and is also reported to be used for fever, menstrual problems, tuberculosis, diuretic and as a tonic for general weakness and illness. An infusion of the plant bark is given by the folklore in diabetes. It is also reported to be used for fever, menstrual problems, tuberculosis, diuretic and as a tonic for general weakness and illness. 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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