

Review Article

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**A HERBAL PLANT CASSIA ANGUSTIFOLIA.****B.G.Solomon Raju*¹, Golusu Balakrishna¹, Devathi Suman Kumar¹, Musunuri Ravi Kumar¹,
Y.Emmanuel Prakash¹, Katragadda Aneela¹**¹Sri Vasavi Institute of Pharmaceutical Sciences, Tadepalligudem, West Godavari, A.P, India.**Received on: 15-11-2011****Revised on: 10-12-2011****Accepted on: 25-12-2011****Introduction:**

Senna is an Arabian name and the herb was first brought into use by the Arabian physicians Serapion and Mesue. Traditionally Senna was used in love sachets. Plants growing at different localities of India have also been found to contain different amount of sennoside B in leaves and pods, and also differ in chromosome morphology. The leaves and pods of this plant contain the commercially important laxative sennoside B.

Cassia Angustifolia is an ornamental plant used in herbalism. It grows natively in upper Egypt, especially in the Nubian region, and near Khartoum (Sudan), where it is cultivated commercially. It is also grown elsewhere, notably in India and Somalia. Alexandrian Senna is a shrubby plant that reaches 0.5–1, rarely two meters in height with branched pale green erect stem, long spreading branches, bearing four or five pairs of leaves. These are complex feathery mutual pairs. The leaflets are varying from 4 to 6

* Corresponding author

B.G.Solomon Raju ,

Email: balakrishna0529@gmail.com

Tel: +

pairs, fully edged, with a sharp top. The midribs are equally divided at the base of the leaflets. The flowers are in raceme interior, blossoms, big in size, coloured yellow that tends to brown. Its legume fruits are horned, broadly oblong, compressed, and flat, contain about six seeds.

When cultured, twice a year the plants are cut down, dried in the sun, stripped and packed in palm-leaf bags. They are then sent on camels to Essouan and Daraou, then down the Nile to Cairo or else to Red Sea ports. For the nomadic Ababda, for example, trade in senna provides a significant source of income.

Plant information:

A small shrub about 1m in length with pale substrate or obtusely angled erect or ascending branches. Leaves usually 5-8 jugate, leaflets oval, lanceolate, glabrous, axillary erect, waxy many flowered, usually considerably exceeding the subtending leaf. Bracts membranous, ovate, or obovate, caducous. The pods are 1.4 to 2.8 in long, about 0.8 in wide, greenish brown in color, and contain 5-7 obovate dark brown and smooth seeds.

Botanical classification:

Plant Division: Magnoliophyta

Class: Magnoliopsida

Family: Fabaceae

Genus: Cassia

Species: *angustifolia*



Chemical constituents:

In the leaf; sennosides A and B based on the aglycones sennidin A & B, sennosides C & D which are glycosides of heterodianthrones of aloe-emodin and rhein are present. Others include palmidin A, rhein anthrone & aloe-emodin glycosides, some free anthraquinones and some potent, novel compounds of as yet undetermined structure. Cassia usually contains more of the sennosides. In the fruit; sennosides A and B and a closely related glycoside sennoside A1. Naphthalene glycosides; tinnevellin glycoside & 6-hydroxymusizin glycoside Miscellaneous; mucilage, flavonoids, volatile oil, sugars, resins etc.

Pharmacology:

The medicinal action of Senna can be attributed mainly to the anthraquinone glycosides, especially sennoside A and B. It appears that the aglycone portion is responsible for its action. The breakdown of

the anthraquinone glycosides in the digestive tract can occur in one of two ways. The bowel flora can directly hydrolyze them in a similar way to that of free active aglycone. Alternatively, in the presence of bile and the sugar moiety, the free aglycone can be absorbed into the blood stream and secreted later into the colon. The final result is stimulation of the Auerbach plexus resulting in increased intestinal muscle contraction. In addition, its mucilage content decreases bodily absorption of fluid leading to an enhancement of the final laxative action.

Dosage:

The herb or its extracts may be taken in several forms - capsules, tablets, and decoction as well as tea. A number of people take capsules and tablets prepared from the senna extract to alleviate constipation. Normally, capsules and tablets containing 10 mg to 60 mg of sennosides are taken daily for a period of 10 days. However, it is not advisable to continue using the medication for more than 10 days. In case there is no relief from constipation even after taking the medication for 10 days, one should consult a physician for necessary actions. In addition to this, consuming a mint tea prepared with the herb is effective for curing cramps. While the dose for the adults is 10 mg to 60 mg of senna daily for 10 days, children above the age of six years may be administered half the adult dose. However, the herb should never be given to children below the age of six as it

may prove to be detrimental. It is best to take senna after consulting a physician.

Uses:

It is recognised by British and US pharmacopoeias. It is useful in habitual costiveness. It lowers bowels, increases peristaltic movements of the colon by its local action upon the intestinal wall. It is used as expectorant, wound dresser, antidysentric, carminative and laxative. Useful in loss of appetite, hepatomegaly, splenomegaly, indigestion, malaria, skin diseases, jaundice and anaemia. Leaves are made into a paste, and applied to various skin diseases.

Liver support: Cassia senna is said to strengthen the liver's functions through its detoxification ability, thereby increasing the production of bile to the intestines which helps to increase blood flow to the abdomen resulting in lessening the cramps caused by overactive uterine muscles.

Digestive system : It is said that cassia senna also helps improve the function of the digestive system which increases the digestive absorption of vital vitamins and minerals that are found deficient in women with endometriosis during menstrual cycle.

Splenomegaly: If women with endometriosis are found to have spleenomegaly, it not only increases the pain in the abdomen during menstrual cramps, but also elevates the risk of infection. Cassia senna helps to reduce the

nervous tension resulting in lessening the symptom of spleenomegaly.

Anemia: Cassia senna also helps in aiding the spleen and liver in production of blood and red blood cells. Without it, it causes anemia for women with heavy flow during menstruation.

Respiratory System: It also helps to improve the absorption of oxygen for the respiratory system by promoting drainage of mucus from the lungs by thinning the mucus from the respiratory tract.

Side effects:

Cassia angustifolia use can cause nausea, diarrhea, dizziness, dehydration, abdominal pain and reddish-colored urine. Additionally, frequent use of the herb can damage the colon's absorption capacity, cause constipation and potentially result in a life-threatening decrease in the concentration of minerals like chloride, bicarbonate and potassium in the body. Viable Herbal Solutions recommends that people with digestive conditions and those women who are either nursing, pregnant or menstruating should avoid using Cassia angustifolia. In an article in The Washington Post, Robert Saper, M.D., strongly advised against using senna for weight loss purposes because of the risk of potentially serious side effects.

Cautions:

Senna should never be used at a stretch for more than 10 days as it has a tendency to make the colon dependent on it for proper functioning. In fact, regular use of senna may also lead to loss of liquids, poor potassium intensity as well as diarrhea. These in turn may cause dehydration and negative consequences on the heart as well as the muscles. If used under the supervision of a physician, use of senna can be safe even during pregnancy and lactation. It may be mentioned here that use of senna is safe for children above the age of six, but should not be administered to children below that age.

Conclusion:

The plant According to old Indian Ayurvedha book Cassia angustifolia is easy available and more useful plant. We are going to identify the medicinal activity by inviva conditions.

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