

INTRODUCTION OF ARAGWADHA ACCORDING TO AYURVEDA

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ABSTRACT

Aragwadha [Cassia Fistula linn.], commonly known as the Golden shower, Indian Laburnum, *Rajavriksha*. It is often used as a highly effective moderate laxative that is safe even for children. It is recommended for the treatment of Jaundice, Gout, Fatty liver, liver disorders, Bronchitis, Skin diseases and so on. In *Ayurvedic* medicine, Golden shower tree is known as “DISEASES KILLER” and it pacifies the 3 *doshas* of *vaat*, *pitta* and *kapha*. It expels the *pitta* and *kapha* from the body. Medicinally it has been various pharmacological activities like antifungal, antioxidants, antimicrobial and anti-inflammatory and hepato protective activity. Cassia Fistula is also employed as a remedy for tumors of the abdomen, glands, liver, stomach and throat for burns, cancer, constipation, convulsions, delirium, dysuria, epilepsy, hematuria, pimples and glandular tumors.

KEYWORDS: Cassia Fistula, *Ayurvedic* Medicine, Constipation, Gout, Anti microbial.

INTRODUCTION

From the ancient period to the modern herbal medicines are used for curative and prevention purpose, most of the people are depend on the herbal medicine for common diseases. Cassia

fistula is one of the herbs used as a medicine.^[1] In *Ayurveda* the name of *Cassia fistula* is *Aragwadha*. It commonly names as a golden shower (*Rajwriksha*). The plant has beautiful yellow flowers. The family of *Cassia fistula* is the Leguminosae, it is the widespread in India. It has the medicinal properties. It is the 10-20 m height. Flowers are in bright yellow colour; petals are 2 inches wide and 10 stemanes. The flowers are pendula's racemes 20 to 40 cm long. The flowers contain the five yellow petals with equal size. The leaves are 15 to 60 cm long and pinnate and it has three to eight pairs of leaflets. The leaflet is about 7 to 21 cm long and 4 to 9 cm broad. The *Aragwadha* has a legume about 30 to 60 cm long, 1.5 to 2.5 cm broad,^[2] The ripe legume shady brown colour, many are aligned seeded in chamber. Seeds are flat covered in a pulp.^[3]

Phytochemistry

In leaf contains the 7 compounds. 4-hydroxybenzyl alcohol (8.7%), eugenol (25.0%), limonene (11.0%), (E)-phytol (21.5%), linalool (9.9%), camphor (13.5%), salicyl alcohol (10.4%), in seed 5 compounds-hydroxymethylfurfural, (2'S)-7-hydroxy-2-(2'hydroxypropyl)-5-methylchromone 5-(2-hydroxyphenoxymethyl) furfural, (2'S)-7-hydroxy-5-hydroxymethyl-2-(2'-hydroxypropyl) chromone, benzyl 2-hydroxy-3,6-dimethoxybenzoate, and benzyl 2 β O-dglucopyranosyl-3,6-dimethoxybenzoate, and two oxyanthraquinones, chrysophanol and chrysophanein. In Bark 27 compounds 1-hexacosanol, 1-octacosanol, oleic acid, palmitic acid, stearic acid, eight long-chain hydrocarbons, heptacosyleicosanate, glyceryl tetraeicosanoate; three sterols, linoleic acid, β -sitosterol, citreorosein, β sitosteryl-3-Oone triterpene, lupeol, eight anthraquinones, chrysophanol, stigmasterol, emodin, Dglucopyranoside, physcion, ziganein, rhein methyl ester 1,4,5 trihydroxyanthraquinone, coumarins, isoscopoletin, scopoletin; and 2,4-dihydroxybenzaldehyde two chromones, 2,5-dimethyl-7-hydroxychromone, 2,5-dimethyl-7-methoxychromone; three aromatic compounds, vanillic acid, isovanillic acid,^[4] In fruit pulp-High amount of rhein.^[5]

Parts of *Cassia fistula* – Constitute of *Cassia fistula* anthroquinone, tannin, flavonoids, glycosides, polyphenol, alkaloids present in the bark and pulp, carbohydrates present in the pulp. total ash is 7.04, 0.012 is acid insoluble ash, 1.03 is water soluble ash, water soluble extracts 29.39, alcohol soluble extracts 25.52.^[6]

Review of *Aragwadha*

Literary review- *Aragwadha* in English cassia- kasia (Greek word) means name of plant and fistula means tube or pipe. It means the plant having the tube-like fruit.^[7]

Action of *Aragwadha*

Raspanchak

Guna- guru, snigdha, mridu

Rasa- Madhur

Vipak- Madhur

Virya- shita

Doshagnata- pitta kaphhar^[8]

Vishesh- anapayitvat^[9]

Pharmacological Action

Laxative-pods and leaves of Cassia fistula having anthraquinone glycones and anthraquinone glycoside content act as a laxative in guinea-pig.^[10]

Anti-Fungal Activity

The extract of flower of Cassia fistula 4-hydroxy benzoic acid hydrate act as an antifungal against the richophyton mentagrophytes and Epidermophyton floccosum. The extract of Cassia fistula showed the anticandidal activity in HIV patient which is the fluconazole resistance. Most inhibited species C. parapsilosis and, C.krusei and the least inhibited species is C. kefyr.^[11]

Wound Healing- The leaves of Cassia fistula alcohol extract showed the antibacterial effect against Staphylococcus aureus and Pseudomonas aeruginosa. On rat it showed better wound closure and generation of new tissue, wound healing is fast.^[12]

Action on pemphigus vulgaris- Rhein which found in Cassia fistula having the strong antioxidant property. It suppresses the leukotriene B4 and C4, reduce the inflammation. High content of phenolic and flavonoids may relate with the mechanism. The fruit oil of Cassia fistula found effective in wound of pemphigus erosions.^[13]

Antiulcer Activity- The ethanol leaves extract of cassia fistula shows the antiulcer activity in gastric ulcer due to pylorus ligation.^[14]

Antipyretic Activity-The ethanolic leaf extract of *Cassia fistula* act as an antipyretic in rats. The extract showed antipyretic activity against yeast infection.^[15]

Anti-leishmaniac Activity- The *Cassia fistula* concentrated boiled extract and hydro alcoholic extract found effective in the infection of cutaneous leishmaniosis. Combination therapy of *Cassia fistula* and meglumine antimonate gel showed treatment of acute cutaneous leishmaniosis.^[16]

Anti-fertility – *Cassia fistula* suppress fertility in male rats. 100 and 200 mg/kg water extract of *Cassia fistula* seeds prevents rat's pregnancy.^[17]

Ovicidal and larvicidal effect- Leaf extract of *Cassia fistula* topical application on hatching egg of *D. koenigii* and increasing concentration showed non viability of egg. The methanolic extract of leaf of *Cassia fistula* was tested on *Culex quinquefasciatus* and *Anopheles stephensi* showed larvicidal and ovicidal effect.^[18]

Antifeedant and larvicidal - Rhein isolated from the ethyl extract of flower of *Cassia fistula* found to be effective against lepidopteron pests, *Helicoverpa armigera* and *Spodoptera* as an ovicidal and larvicidal. The larvae who survive convert in to malformed adults.^[19]

Anticancer -The study showed the *Cassia fistula* seeds extracts anticancer effect in the umbilical cord mesenchymal stem cell and HeLa cell line in vitro.^[20]

Hyperlipidemia activity -*Cassia fistula* extracts showed hypolipidemic and antioxidant property in Mice. The extract showed the significant protection in liver and heart tissue.^[21] The aqueous extract of high dose effective in hyperlipidemia.^[22]

Analgesic and anti-inflammatory- Leaf extract of *Cassia fistula* showed the anti-inflammatory and analgesic changes in rats.^[23]

Antibacterial- The extract of *C. Fistula* showed against the bacteria *S. aureus*, *E. coli*, *B. cereus*, *S. epidermidis* and *K. pneumoniae*. Ethanolic and methanolic extracts of *Cassia fistula* the susceptible in *E. coli* and *K. pneumoniae*. Also least sensitivity in *S. aureus* and *B. cereus* showed and, ethanolic extracts effective against *E. coli*, *S. aureus*, *K. pneumoniae* and *S. epidermidis*.^[24] *Cassia fistula* of organic solvents of ethyl acetate, petroleum ether,

chloroform, and methanol effective against *S. aureus*, *E. coli*, *S. epidermidis*, and *K. pneumonia*.^[25]

Antioxidant - Cassia fistula is the rich source of antioxidants. All extracts showed the antioxidant property.^[26] Applying the response surface methodology Cassia fistula pods retained the antioxidant property.^[27]

Antifatigue-The ethanolic extract of Cassia fistula showed in the reduction in locomotors activity and it reduces anxiety. It is also effective in the fatigue syndrome.^[28]

DISCUSSION

The *Aragwadha* is the *Ayurvedic* drug used in the *Ayurvedic* practices widely. It is the mainly used as the *virechana* drug(laxative) for the removal of toxins. It also used in the *krimi*. In market the *Aragwadha Kapila vati* is widely used as antihelminthic. In *Sushrut samhita* the ten *kashayas* mentioned for *Madhumeha* and in which *Aragwadha* is written. This drug also quoted in the *Kushtha* (skin diseases). This herb used in various form like *kwatha*, *churna*, *arishta*, *avleha*. It has various medicinal uses as well as in the form of food preservative and dying process. It is found to be effective as Antioxidant and it act as an antimutant, in pyrexia, constipation, diabetes, skin disease like urticaria, pyhigus vulgaris, fungal infection.

CONCLUSION

The traditional medicinal use of *Aragwadha* in *Aurvedic Samhitas* is in Fever, Skin diseases, fistula, and abscess, diabetes, wound. *Ayurveda* shows the multiple uses of *Aragwadha* on the basis of *Raspanchak*, this study had been done in ancient era similarly, and mainly in *Panchakrma* procedures *Aragwadha* widely used as *virechana* (laxative) for removal of toxins which sticks on the wall of gut. It is safe laxative. modern science proved that the Cassia fistula having the property of antifungal, antipyretic, wound healing, cancer, antidiabetic, antibacterial, anti-hyperlipidaemic. Main content of the Cassia fistula is the Eugenol, E phytol which acts on the diseases. So here is more study is required to enlighten the properties of Cassia fistula.

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