

# Review of Uses Cassia Sophera Linn Plant Belonging to Family Caesalpinieae

V.K. Dwivedi

Department of Chemistry,  
YIT, Sitapura Jaipur,  
Rajasthan, India  
Vijaychemistry2014@gmail.com

D. Thakur

Department of Chemistry,  
Peoples Campus, Bhanpur Bypass Road,  
Bhanpur, Bhopal,  
Madhya Pradesh 462037

**Abstract-** “Nothing existed in the world of thought matter and experience which is not a medicine” Disease, decay and death have always co-existed with life. The study of diseases and their treatment must have been contemporaneous with the dawn of human intellect. Man's existence on this earth has been made possible only because of the vital role played by the plant kingdom in sustaining his life. The wealth of India is stored in natural flora India is virtually a herbarium of the world. India possesses all type of climate conditions varying from temperate to tropical and dry to humid and wet. There are about 2060 higher plant species being used in Indian system of medicine and nearly 600 species ayurvedic system, 50 in Unani system and 550 species in phytopharmaceutical industries. Besides these, many more are being used in folklore and traditional remedial systems. This article aims to provide a comprehensive review on the therapeutic and pharmacological as well as phytochemical aspects of Cassia Sophera plant. It is widely used in traditional medicinal system of India has been reported to possess Antioxidant, cytotoxic, and Hemorrhoidic activity etc. The medicinal potential of flora has been exploited to isolate and achieve various constituents like steroids, terpenoids, essential oils, polyacetylen, hydrocarbon, Alkaloids, peptides, Carbohydrates, flavanoids etc. It is clear that the medicinal properties and therapeutic uses of Cassia Sophera as well as its phytochemical investigations prove its significance as a valuable medicinal plant [1].

**Keywords-** Valuable medicinal plant Cassia Sophera linn Hemorrhoidic

## I. INTRODUCTION

Cassia Sophera linn belonging to family Caesalpinieae, popularly known as Kasmarda. In the ethnobotanical claims, the leaves, seed and root are considered to be useful pharmacological activity like anti-inflammatory, anti-rheumatic, anti-bacterial, and anticonvulsant antioxidant, hepatoprotective, antiasthmatic and hypoglycemic.

Cassia Sophera plant have great potential use specially as traditional medicine and homoeopathic drugs. The point of present paper was to review the use and Morphology of plant Cassia Sophera and their pharmacological activity and also highlight their useful candidates which can be used for various treatment and prevention of Human diseases and formulation of tablet.

## II. PLANT GENERAL DESCRIPTION

This plant belongs to family Caesalpinieae, and is under the genera cassia Linn. Plants of genera cassia are erect shrubs or trees, rarely herbs. Leaves abruptly pinnate. Flowers usually large and showy, axillary racemes and terminal panicles. Calyx tube very short; sepals broad & narrow, imbricated.

Petals five imbricate, sub equal usually broad. Stamens normally 10, but rarely all perfect, 3-5 being reduced to staminodes, or altogether absent; anthers usually basifixed, dehiscent some times by terminal pores Ovary searise or stalked, many ovules; style in curved; stigma terminal. Pod variable, terete or flat usually saccate, dry, dehiscent or altogether absent; anthers usually, basifixed, dehiscent some times by terminal pores ovary searise or stalked, many ovules; style in curved; stigma terminal.

Pod variable, terete or flat usually saccate, dry, dehiscent or indehiscent, the albuminous flattened seeds sometimes parallel with the valves sometimes with the septa- Species about 380, everywhere in the tropics a few extra tropical. It is taken, kashna, Madhura; beneficial in deranged kapha, vata and pitta, dyspepsia coughs; digestive and useful in throat affections. The plant exhibited anti-cancer activity. It is reported to be extensively used in homoeopathy. A decoction of the plant is antidiuretic.

The roots are considered diuretic. A paste of the roots is sometimes substituted for the leaf. The extracts of root, seed and leaf inhibit the germination of Drechsleria Rydas.

### 1. Vernacular Names:

Sanskrit; Kasmarda; Hindi; Kashaunda; Bengali; Chota Kalkesenda; Sularaj; English; Sophera Senna [1].

## 2. Uses of plant parts:

Seed: tonic for eyes. Elsewhere the plant is used for cough, fever, headaches, herpes malaria, ophthalmia, pneumonia, skin ailments, scabies, sores, leaves used for ringworm, the plant decoction for bronchitis. Ayurvedics use the roots for elephantiasis, ringworm, and scorpion stings.

The leaves are considered alexiteric, aphrodisiac and stomachic for asthma, biliousness cough, fever, hiccups and sore throat, unani system used the seeds for coughs, the fruits for scorpion strings and the roots for ring worm and snakebite. [2-9]

## III. THERAPEUTIC USES OF CASSIA SOPHERA PLANT

Whole plant seeds, steam – bark and root act as an expectorant and efficacious in acute bronchitis; seed: anthelmintic and cure skin diseases. [10]

### 1. Leaves:

Anthelmintic are used externally in ringworm. Decoction made into paste with sandal wood find application in the treatment of tapeworm and the juice is used in the treatment of the gonorrhea. [9, 10].

The leaves passed purgative properties. Their juice made into a paste with sandalwood or mixed with lime. It is considered specific for ringworm; externally, it is used for washing syphilitic sores. The juice honey or an infusion or decoction is administered as an expectorant for cough cold, bronchitis, Asthma and hiccups.

An infusion of fresh leaves is given with sugar in Jaundice and in sub-acute stage of gonorrhea. Internally, it is reported to act febrifuge in rheumatic and inflammatory fever; it is skin- diseases. A paste of the leaves is used for curing piles [12]. The seeds are cathartic, and also used as a febrifuge the powdered seeds, mixed with honey are administered in diabetes an ointment made from the seeds of C. Sophora Linn; sulfur and water are used to cure ringworm sores, scabies and psoriasis, in China are used to make the eye bright [13]. Its infusion is considered useful diabetes and its juice in Asthma. It is also used in skin – diseases, and in the treatment of ringworm but sometimes it is reported to cause dermatitis [14-15].

## IV. ROOT OF CASSIA SOPHERA LINN IS REPORTED TO BE USED IN

Bite, leaves in ringworm, seed in skin diseases [16]. It is used for resolving, blood purifier, carminative, and purgative, digestive, diaphoretic (17-18). In ethnobotanical literature, it is mentioned to be effective in the treatment of psoriasis, asthma, acute, bronchitis, cough, diabetes and convulsions of children [19-20].

C. Sophora leaves have been known for their anti-oxidant properties with the possible use of natural antioxidants as food preservatives. Anti-inflammatory and cancer, preventive activities are also reported. C. Sophora Linn is known as “Kasmard” in Ayurvedic Literature which means cough suppressant (Kas-Cough, Mard – To protect) [21].

In folk literature it is used in Asthma as Expectorant and in rheumatic disorders. C. Sophora is used in Homeopathy also Decoction of plant is used as anti-diuretic. Its leaves are given with sugar in Jaundice, and in sub-acute stage of Gonorrhea. It is used as febrifuge in rheumatic and inflammatory fever. However, it is also used in some immunomodulatory preparations of homeopathy and Ayurveda. [22]. It is useful in epilepsy, asides, dyscrasia of liver skin disorder, jaundice, fever particular pain and palpitation. [23-24].

C. Sophora Linn barks in the form of the infusion in powdered seeds, mixes with honey are given in diabetes. The root is administered internally with black paper for snake bite. Infusion of leaves is also useful in gonorrhea and syphilitic sores. [25].

The use of traditional medicine is widespread and plant still represents a large source of natural antioxidants that might serve as leads for the development of novel drugs [26]. Several examples have revealed the fact that the plants which contain antioxidant potential demonstrate the beneficial effects in inflammatory disease e.g., ledum greenlandicum extracts possess an antioxidant and anti-inflammatory activity, which supports its ethnopharmacological use [27].

Treatment of inflammatory diseases, psoriasis, cough, arthritis, diabetes and convulsions of Children [28]. The chemical analysis of the seed of C. Sophora reveals the presence of ascorbic acid, dehydroascorbic acid and sitosterol.

C. Sophora has shown inhibitory activity against ringworm. The seed extracts of C. Sophora were reported to having hepatoprotective activity in rats [29]. Aqueous and methanol extracts of seeds of C. Sophora was shown to exhibit significant hypoglycemic activity against alloxan diabetic rabbits. Relatively, little work has been done on the phytochemistry and chemical analysis of C. Sophora. Antioxidant principles have been identified in leaves of C. Sophora [30-32].

## V. CONCLUSION

It is an Ayurvedic plant which is used in several tradition medicines to cure various diseases. It is also used to be Homeopathic, Herbal, and Therapeutic for various treatments like curing piles, asthma, cough, snake bite,

inflammatory fever, jaundice, bronchitis, ringworm, diabetes and sores etc.

## REFERENCES

- [1] Aminabee SK and Lakhmana Rao an International general of pharmaceutical, chemical and biological sciences 2012, 2(3), 408-414.
- [2] Duke, J.A. and Wain, K.K. 1981. Medicinal plants of the World. Computer index with more than 85,000 entries. 3 vols. 1654 pp.
- [3] Kritikar, K.R and Basu, B.D. 1975 Indian medicinal plants 4 vols 2nd Edition, Jayyed press, New Delhi. 4. H.M.G.(His Majesty's Government of Nepal)1970.Medicinal plant of Nepal Ministry of Forests,Thapathali, Kathmandu, Nepal 153 pp.
- [4] Medicinal plants of China vol 1 and 2 James A. Duke Edward S.Ayensu Edition; 1985. Publications, INC (USA).
- [5] Singh, H.1988 Ethno biological treatment of piles by Bhoj of Uttar Pradesh Anc Sci, Life 8:167-170.
- [6] Lakshamanan,K.K and A.S Sankarnarayanan,1988.Some folklore medicines in the remotes hemlets, Dhoomanoor and Champukarai of Anai Katty hills,Coimbatore,Tamilnadu,Indian J. forestry 11:217-219.
- [7] Chaudhuri, Rai H.N.D.C, Pal, N.C, and Sahaand B.Roy 1985 some wild edible plants in Calcutta Markets Manand Life .11:45-58.
- [8] Chopra R.N. Nayar, S. L. and Chopra, I.C.1956.Glossary of Indian Medicinal plants CSIR New Delhi.
- [9] Planta med CSIR New Delhi, PP 28, 182, 1975.
- [10] The wealth India, PP 2, 98, 1950 CSIR, New Delhi.
- [11] Dhar et al, Indian J.exp.vols, 6, PP 232, 1968.
- [12] Kapoor et al, Sci and cult, PP 37, 349, 1971.
- [13] Singh, bull bot surv India, PP 18,85,1976.
- [14] Uhe, Econ bot, PP 28,17,1974.
- [15] Data and Mukherji, loc cit, for Abstr, PP 69, 607, 1978.
- [16] Lubhaya R: Goswami Bayanul Advia, Goswami Pharmacy, QasimJan Street, Delhi, Vol.2, PP147, 1975.
- [17] Kareem N.Tarjuma Makhzanul Advia, Matba Naval Kishore, Lucknow, Vol-2, PP 105, 1879.
- [18] Dutt U.C. The Materia Medica of the Hindus, Mittal Publications, New Delhi, PP 156-157, 1995.
- [19] Agharkar S.P. Medicinal plant of Bombay Presidency, Scientific publications, Jodhpur 58, 1991.
- [20] KiritikarK.R.Basu, B.D. and I.C.S. (1980). Indian Medicinal Plants 2nd Ed.2, PP 863-864.
- [21] Ghani (1998) Medicinal plants of Bangladesh, (Asiatic society of Bangladesh) PP 122.
- [22] Nadkarni AK (1998) Indian Matria Medica. Popularprakashan pp.138-139.
- [23] Ghani M.N. Khazinatul Advia, Naval Kishore press, Lucknow, Vol.3, pp330-333, 1913.
- [24] Khan M.A.Muheet-e-Azam, MatbaNizami, Kanpur, vol.4 part 1, PP 80-81, 1869.
- [25] Tiwari and Bajpai, Indian J. Chem ,1981,20B, 437:
- [26] Confort F, Sosas, Marrelli M, Menichini F, Statti A G, Uzunow D,Tubaro A, Menichini F, Loggia D. R. vivo anti-inflammatory and vitro antioxidant activities of Mediterranean dietary plants. Journal of Ethnopharmacol; PP 116; 144-151, 2008.
- [27] Longtin A. Laprise C. Legault J. Antioxidant, anti-inflammatory and anticancer, Activities of Methanolic extracts from Ledum Groenlandicum journal of Ethnopharmacol Vol.111; PP 22- 28,2007.
- [28] Nadkarni K.M. Indian Medicinal Plants and Drugs with their medicinal properties and uses. PP 95- 96. 2005.
- [29] Sharma M.C. Joshi C. Plant used in Skin diseases of animal. Natural product radians; 293-299, 2004.
- [30] Anonymous, the welth of India published by CSIR, New Delhi, and Vol. 3: (Ca-Ci) PP 366, 1992.
- [31] Malohotra S, Mishra K. A new antraquinone from Cassia Sophera Linn. Heartwood. Planta Medica Vol. 46: 247-249, 1982.
- [32] Tiwari RD, Bajpai M.A new flavono -8-C-Glycoside from the leaves of Cassia Sophera phytochem Vol., 5, PP 437-438, 1980.