COCCULUS HIRSUTUS, A VERSATILE HERBAL MEDICINE: A REVIEW


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Abstract

Cocculus hirsutus commonly known as broom creeper belongs to the family Menispermaeae. It is easy available and high contents of pharmacological active constituents. It is widely used in folk medicine in tuberculosis, leprosy, skin diseases, dyspepsia, pruritis, and flatulence etc. Hence an effort has been made for the enlighten the importance of different parts of Cocculus hirsutus.

Key words: Cocculus hirsutus, Pharmacological, Folk medicine.

Introduction

Herbs are the cradle of all chemicals with medicinal properties that have been used by wise men for ameliorating the disturbed anatomy and physiology of ailing ones. Herbal drugs have been used by human being since time immortal. Herbal drugs are prescribed widely because of their effectiveness, less side effects and relatively low cost (Venkatesh et al., 2003).Therefore investigation on some active principles from traditional medicinal plants has become more important (Suba et al., 2004).The world health organization (WHO, 1980) has also recommended the evaluation of the effectiveness of plants in condition where we lack safe modern drugs (Upathaya and Pandy, 1984). Cocculus hirsutus Linn (Menispermeaeceae), commonly known as Jal-Jammi (Chopra et al., 1958) or Broom creeper is found in moderately cool and hot regions of India; particularly Tamilnadu, Bihar and Punjab. It is a perennial climber and reaches 2 to 3 m above ground. Its leaves are 3 to 5 veined from the base and are variable in shape. The older leaves are often distinctly 3 to 5 lobed, while the younger leaves are oblong ovate to somewhat ovate. Its leaves are covered in yellowish velvety hairs. Flowers of this plant are in axillary clusters and they are unisexual, while its sepals are densely hairy. Its fruit is somewhat ellipsoid (4 mm in diameter), fleshy and purple blue when ripe (Kirtikar and Basu, 1981). C. hirsutus is wildly distributed in Africa and Asia tropical, particularly Indian subcontinent (Indian-Bihar, Gujrat, Orissa, Rajasthan, Tamil Nadu and Pakistan), Western Asia (Iran) and Asia temperate (Saudi Arabia, Yemen). In Tamil this plant is known as Kattukkodi. Indian tribes use various plant parts of this plant for a wide
range of ailments including constipation, kidney problems (Caius, 1986). In Tamilnadu Kaani tribes of Karaiyar using this plant for the treatment of skin disease, sexual debility and wound healing. An effort has been made for the enlighten the importance of different parts of *Cocculus hirsutus*.

**Phytochemical review:**

The plant has been reported to contain essential oil, β-sitosterol

![β-sitosterol](image)

**Ginnol** (Merchant et al., 1962).

Ethanolic extract of whole plant showed the presence of isoquinoline alkaloid d-trilobine

![d-trilobine](image)

**dl-coclaurine**

(Jaganatha, 1961), Cohirsinine (Viquaruddin, 1991), Jamtinine (Viquaruddin, 1992)
Pharmacological review:

The hepatoprotective effects of Cocculus hirsutus could be due to the presence of phytochemicals like β-sitosterol, trilobine, isotrilobine, syringaresional, protoquerctic, ginnol and glycosides (Ganapaty et al., 2002). Anti hyperglycemic (Badole et al., 2006); antibacterial (Panda et al., 2007); Aerial parts of the plant reported to be used as a diuretic and laxative (Ganapaty et al., 2009) effects. The Cocculus hirsutus shows hypoglycemic activity (Ganapaty and Bijay, 2006), hypolipidemic activity (Palsamy et al., 2007) and spermatogenic activity (Jayakar and Sangameswaran, 2007). Root extract showed analgesic and anti-inflammatory effect (Nayak, 1993), laxative, demulcent, analgesic and also as tonic and diuretic (Glanze, 1996). The leaf juice of this plant is used in the treatment of eczema (Masilamani, 1981). Leaves and stem are used for treating eye diseases. The juice of leaves coagulates in water and forms mucilage, which is used externally as a cooling and soothing agent in impetigo (Nadkarani, 1982). The aqueous extract of leaves of C. hirsutus show better antidiabetic activity. The leaves of the plant have been evaluated for antihyperglycemcic (Badole et al., 2006), antibacterial (Panda et al., 2007). The juice of leaves coagulates in water and forms mucilage, which is used externally as a cooling and soothing agent in eczema and impetigo (Nadkarani, 1982).

Cocculus hirsutus leaves contain a high proportion of mucilage. The majority of the traditional uses of Sisi leaves can be attributed to the mucilage content only. This mucilage contains polysaccharides and a gelatinous type of material. This material is not absorbed in the G.I.T, and passes through the system undigested. Cocculus hirsutus leaves are used topically as emollient and demulcent. It has been non- toxic to human skin. Hence in the present study, it was planned to formulate Flurbiprofen gel using cocculus mucilage as a gelling agent and to study its characters.(Leung et al., 1996)
The roots of Cocculus hirsutus have been mentioned as bitter, acrid, laxative, tonic and diuretic. The root destroys kapha and vata lessens bile (Kirtikar and Basu, 1987). Roots and leaves are given for Sarsap- arilla, as diuretic and in gout (Nadkarni, 1982). The root is bitter and used as alterative, emollient, demulcent, tonic, antiperiodic in fever, in malaria, joint pains, in treatment of skin diseases, constipation and kidney problems (Chopra et al., 1996). Decoction of the root mixed with long pepper is used in chronic rheumatism and syphilitic cachexia (Chadha, 1950; Nadkarni, 1976). The roots of Cocculus hirsutus have been mentioned as bitter, acrid, laxative, tonic and diuretic.

Folk medicine claims that it may be used in jaundice. Indian tribes use various plant parts of this plant for a wide range of ailments including constipation, kidney problems (Caius, 1986). In Tamilnadu Kaani tribes of Karaiyar using this plant for the treatment of skin disease, sexual debility and wound healing. The roots are used for the treatment of rheumatism, tuberculosis, leprosy, dyspepsia, pruritis, flatulence, laxative, aphrodisiac, antipyretic and leaves are used are used in biliousness, eczema, gonorrhea, ophthalmia, sexual debility and neuralgia (Warrier et al., 2005). Traditionally the plant was patronized for its unique property of healing all type of cuts, wounds and boils in very less time and with less pain. It is also used in the treatment of gonorrhea, spermatorrhoea, urinary troubles, diarrhea and hyperglycemia 9. It is also used in treatment of gonorrhea, spermatorrhoea, hyperglycemia etc (Kirtikar et al., 2002). The decoctions of the leaves are used for treatment of gonorrhea, spermatorrhoea and diarrhoea [5]. Leaves are also used in eczema, dysentery, leucorrhoea, and urinary problems. Leaves and stems are used for treating eye diseases. The roots are used for the treatment of rheumatism, tuberculosis, leprosy, skin diseases, dyspepsia, pruritis, and flatulence, laxative, aphrodisiac, antipyretic and leaves are used are used in biliousness, eczema, gonorrhea, ophthalmia, sexual debility and neuralgia (Warrier et al., 2005).

CONCLUSION

All part of Cocculus hirsutus have excellent pharmacological properties and lot of chemical constituents were isolated from the different part of Cocculus hirsutus but it have need for the isolation of active constituents.

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REFERENCES


