

SHORT COMMUNICATION

***Cocculus hirsutus* (L.) Diels. (Menispermaceae): An effective ethnomedicine for the treatment of leucorrhoea**

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ABSTRACT

Information about an interesting and hitherto unknown ethnomedicinal use of *Cocculus hirsutus* (L.) Diels. (Menispermaceae) recorded from the tribal inhabited localities of Ratlam district (M. P.) has been dealt with in this communication. It has been observed that the plant species is acting like a wonder drug against leucorrhoea. This is interesting to ethno-medico-botany.

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Ratlam district lies in the western part of the Malwa Plateau in Madhya Pradesh. Ratlam has an important place in the railway map of Madhya Pradesh. Its position as the Divisional Headquarters of western railway has considerably contributed to its growth as a railway town. The district forms part of the Commissioner's Division of Ujjain. The mathematical limits of the district extend from 23° 05' North to 23° 55' North and from 74° 30' East to 75° 42' East. It has the shape of a wide crescent with its concave on the east and widest part in the south. The greatest length of the district extends about 122 km. from southwest to northeast. The district is bounded by Mandsaur district on the north, Jhabua and Dhar on the south, Ujjain on the east and Chittorgarh and Banswara district of Rajasthan State on the west. Shajapur district of Madhya Pradesh and Jhalawar district of Rajasthan also touch the north eastern boundary of Ratlam district. The elevation generally varies from 434 to 549 m above mean sea level. The district comprises an area of 4861 sq. km inhabited by 1,455,069

persons, living in 1080 villages covering 8 tehsils Viz. Alot, Bajna, Jaora, Piploda, Ratlam, Rawti, Sailana and Tal (Census 2011). Bhils are the main inhabitants of different villages of the district. According to 2001 census the population of Bhil tribe in the district was 2.26 lac constituting about 23.27% of the total population. The forests, which occupy a total area of 499.92 sq km or 10.26 %, are of the dry deciduous Vb type (Champion and Seth, 1968). The forests are dominated by Teak (*Tectona grandis* L.f.). Other notable wood species are Sajad [*Terminalia tomentosa* (DC.) Wt. & Arn.], Mahua (*Madhuca indica* Gmel.), Tendu (*Diospyros melanoxylon* Roxb.), Palas [*Butea monosperma* (Lam.) Taub.], Kalam [*Mitragyna parviflora* (Roxb.) Korth.], Dhaora [*Anogeissus latifolia* (Roxb.) Wall. ex Bedd.], Bel [*Aegle marmelos* (L.) Corr.], Bija (*Pterocarpus marsupium* Roxb.) and Bamboo (*Dendrocalamus strictus* Nees.), which constituted a significant chunk of the middle canopy of the forests. In Ratlam district there are two important rivers, namely, the Chambal flowing north along

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with its tributaries and the Mahi flowing to the north-west. The climate of the State is generally sub-humid with an annual rainfall ranging from 700-1200 mm. The minimum and maximum temperatures range between 6^o C and 43^o C in the months of January and May, respectively. The black cotton soil predominates the entire district.

During extensive field trips in some tribal inhabited villages of the district the author recorded new and interesting ethno-medicinal uses of plants in the surrounding used by the tribals. Ethnobotany has introduced numerous little-known or unknown uses of plants (Jain 1981, 1991, 2002, 2004). The author is engaged in ethnomedicinal investigations in this district, results of which have been published (Jadhav 2016, 2017, 2018, 2019) earlier. This paper is in link of the same work. In the present investigation, the author recorded interesting ethno-medicinal uses of surrounding plants used by the tribe. The present paper provides the very effective and hitherto unknown ethno-medicinal use of *Cocculus hirsutus* (L.) Diels. (Menispermaceae) used by local inhabitants of Ratlam district (M.P.). It has been observed that the plant species is acting like a wonder drug against leucorrhoea. This disease is quite common women in India well as all over the world. In India this disease is, commonly known as 'Shwet Pradar' and 'Safed Pani', refers to a whitish discharge from the female genital organs. It is an abnormal condition of the reproductive organs of women.

Ethnobotanical survey was conducted in 52 different tracks in the forest areas of Ratlam district during 2004-2008 and more than 300 ethnomedicinal plants were recorded. First hand data regarding various uses and local names of plants were collected through personal contacts established with a large number of tribal informants and "Bhopa" (Traditional rural medicine men). During the survey the Bhopa were contacted and they were taken to the field for collecting information about ethnomedicinal plant, local names and part used, method of preparation of the drug and approximate dosage of administration. These data are to be recorded in the field book. Voucher specimens were collected for authentication of

information and future reference. With the help of local name and specimen it is possible to verify the uses with other villagers and the data were considered valid if at least 2 informants provided similar uses about the medicinal plant. Herbarium specimens prepared following the standard method (Jain and Rao, 1978) have been deposited in the herbarium of Botany department, Govt PG Arts & Science College, Ratlam (M.P.) and Herbarium specimens were identified with the help of standard Flora (Verma et al., 1993).

BOTANY

Cocculus hirsutus (L.) Diels. (Menispermaceae) *Syn.: Menispermum hirsutum* L.; *C. villosus* DC. occurs commonly in and around Ratlam, a district in western Madhya Pradesh. The species is known as 'Dechri' in Bhil tribe. It is known as 'Jaljamni' in Hindi, as "Huyer" in Bengali, as "Vevdi" in Gujarati, as "Dusari balli" in Kannada, as "Patalagarudakkoti" in Malayalam, as "Vasan vel" in Marathi, as "Kattukkoti" in Tamil, as "Dusaratige" in Telugu, as "Broom creeper" in English and as "Patalagarudah" in Sanskrit.

Taxonomic description: Scandent, dioecious shrubs, with cordate – lanceolate or subdeltoid leaves. Male flowers minute, yellowish – green, in panicles. Fruits reddish - purple, smooth; Seeds transversely rugose.

Flowering & Fruiting: November-May.

Chemical constituents: Leaves contain Trilobine & Isotrilobine.

Root contains D – Trilobine, DL – Coclaurine.

Stem contains β – Sitosterol, ginnol & mono methyl ether of Inositol (Jadhav, 2008).

Medicinal properties: Root - Acrid, alexeteric, alterant, anodyne, antipyretic, aphrodisiac, bitter, carminative, demulcent, depurative, digestive, diuretic, emollient, expectorant, laxative, tonic.

Leaves - Anodyne, cooling, demulcent, expectorant, mucilaginous (Jadhav, 2008).

Therapeutic uses: Root - Bronchitis, burning sensation, cephalalgia, colic, cough, dyspepsia,

flatulence, fractures, general debility, gout, hypertension, intermittent fevers, leprosy, poisonous bites, pruritus, skin diseases, spermatorrhoea, strangury, tubercular glands.

Leaves - Cough, eczema, gonorrhoea, neuralgia, ophthalmia (Jadhav 2008).

NEW ETHNOMEDICINAL USE

Recently, a very effective and interesting ethnomedicinal use of the *Cocculus hirsutus* (L.) Diels. (Menispermaceae) has been observed in Ratlam district of Madhya Pradesh (India) among the tribal people for the treatment of leucorrhoea. Fresh leaves of the plant are to be collected in the hours of early morning after Sun rise. Paste of fresh leaves is mixed with Jaggery and about seven small pills are prepared. One pill has to be taken early in the morning by the patient on empty stomach with fresh butter milk for a period of seven days to cure leucorrhoea. If the disease is not cured, then they have to take the same dose again for seven days after giving a break of one day. This can only be repeated three to five times, until the patient becomes healthy. The above reported use of this plant species has not been recorded earlier by any other worker.

The plant has been used by the natives of the district for the treatment of leucorrhoea. This is a widely known ethnomedicine among the tribal people of Ratlam district. They have been using it since time immemorial. The ethnomedicinal therapy plays a vital role in the primary healthcare of urban and rural population, and has a potential for the discovery of new drugs herbal origin, which are metabolized in the human body having no side effect. The local inhabitants of the district use this medicinal plant in the treatment against leucorrhoea and shows very effective and successful results. *Cocculus hirsutus* (L.) Diels. (Menispermaceae) exhibits highly potent medicinal properties. The transmission of information particularly use of medicinal herbs through oral tradition with utmost secrecy. This traditional knowledge system of the tribal communities needs to be studied, documented, preserved and used for the benefit of

mankind. Moreover, the people of all communities are rapidly acquiring the modern culture and custom. Thus, there is an urgent to record their empiric and endemic knowledge before it all vanishes. These ethno medicinal data needs verifications on chemical & pharmacological ground. They also deserve for biological activities and clinical trials for improving their efficacy and safety. These, in turn, will fill up our pharmaceutical industries on sound footing.

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