

SHORT COMMUNICATION

Ethnomedicinal plants used for the treatment of dog bite by Bhil tribe of Ratlam district in Madhya Pradesh

DINESH JADHAV

Article History

Received: July 18th, 2020

Revised: April 19th, 2021

Accepted: April 24th, 2021

Key Words

Bhil

Dog bite

Ethnomedicinal plants

Ratlam district

ABSTRACT

The present paper provides the information on ethnomedicinal plants used by Bhil tribe of Ratlam district (M.P.) for curing dog bite. It deals 11 plant species under 10 genera belonging to 10 families. The botanical names followed by local names, family, VSN, the method of preparation of drug and mode of uses of the plants are also mentioned.

© CSIR-Central Institute of Medicinal and Aromatic Plants, Lucknow-226015

Rabies is an infectious viral disease caused by a rabies virus; in up to 99% of cases dogs are responsible for rabies virus transmission to humans. It is spread to people and animals through bites or scratches, usually via saliva. Rabies symptoms usually appear around 4-12 weeks after exposure; early symptoms include fever, muscle weakness, tingling sensation and headache. Every year, thousands of people around the world dies from rabies. Approximately 80% of human cases of dog bite occur in rural areas. The good news is that this disease is preventable with the rabies vaccine. Every year, more than 29 million people worldwide receive a post-bite vaccination. With increasing the use of traditional medicine in recent years, medicinal plants play crucial role in management of dog bite. In India, modern allopathic medicine as well as traditional medicines have equal status. Some medicinal and ethnomedicinal data collected from rural and urban area of India effectively support the claim of the treatment of dog bite (Paudel et al., 2018).

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

E-mail: dinj2ad@yahoo.com

Department of Botany, Govt. PG Arts & Science College, Ratlam-457 001 (India)

Doi: <https://doi.org/10.62029/jmaps.v43i2.Jadhav>

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 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 °C and 43 °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 this district, 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 (Jadhav 2019; Jain 1981, 1991, 2002, 2004). The author is engaged in ethnomedicinal investigations in this district, results of which have been published earlier (Jadhav 2016, 2017, 2018). This paper is in link of the same work. In the present investigation, the author recorded new and interesting ethno-medicinal uses of surrounding plants used by the tribe. The present paper provides the information on some ethnomedicinal plants effectively used in the treatment of dog bite by Bhil tribe of Ratlam district (M.P.).

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. Eleven ethnomedicinal plants have been discussed here which are effectively used in the treatment of dog bite. 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, 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 were recorded in the field book. Voucher specimens are 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 are considered valid if at least 2 informants provided similar uses about same medicinal plant. Herbarium specimens prepared following the standard method have been deposited in the herbarium of Botany department, Govt PG Arts & Science College, Ratlam (M.P.). These herbarium specimens were identified with the help of standard Flora (Mudgal et al., 1997; Singh et al., 2001; Verma et al., 1993).

ENUMERATION

Plant species were enumerated alphabetically with their botanical names, family, local names, VSN and folklore claims.

Balanites aegyptiaca (L.) Delile,
(Balanitaceae), 'Hinogiro', DJ-68

Extract of stem bark is useful in dog bite.

Calotropis gigantea (L.) Ait. f.,
(Asclepiadaceae), 'Ankro', DJ-69

Extract of root is given with water to cattle in the case of Dog bite.

Calotropis procera (Ait.) R.Br.,
(Asclepiadaceae), 'Ankro', DJ-15

Latex of leaves is mixed with wheat flour (*Triticum aestivum* L.) and small pills are prepared, these pills are taken in the case of dog bite.

Cayratia carnos (Wall.) Gagnep., (Vitaceae), 'Choti gudvel', DJ-146

Extract of root is taken in the case of dog bite.

Chrozophora rottleri (Geis.) A. Juss. ex Spreng., (Euphorbiaceae), 'Jungli rukhdi'. DJ-174

Extract of leaves is taken with water in the case of dog bite.

Datura metel L. (Solanaceae), 'Karo dhaturu', DJ-110

Extract of seeds is taken with water in the case of dog bite.

Gloriosa superba L. (Liliaceae), 'Karihari', DJ-184

Extract of root is given in the case of Dog-bite.

Mucuna pruriens (L.) DC., (Papilionaceae), 'Kemuch', DJ-188

Extract of seeds is taken with water to cure dog bite.

Opuntia elatior Mill. (Cactaceae), 'Naagphani', DJ-189

Two spoonfull latex is taken with water and also applied on wound in case of dog bite.

Tinospora cordifolia (Willd.) Miers. ex Hk. f. & Th., (Menispermaceae), 'Limbvel', DJ-50

Juice of stem is useful in dog bite.

Triticum aestivum L. (Poaceae), 'Gehu', DJ-135

Five drops of the juice obtained from the plant of Haslathuwar (*Opuntia denilli*) is mixed with wheat flour and few pills are prepared. One pill taken in the case of dog bite.

The study provided some new 11 ethnomedicinal plants used in the treatment of dog bite by Bhil tribe of Ratlam district (M.P.). These ethnomedicinal data provide a base to start the search of new compounds related to

phytochemistry, pharmacology & pharmacognosy. These ethnomedicinal research has led to the development of many commercial plant-derived drugs. With the help of these data we record the present orally transmitted knowledge which was in danger of being forgotten. This study of traditional plant can also discover new drugs for the welfare of mankind in future.

ACKNOWLEDGEMENT

Author is grateful to Dr. S. K. Agrawal (Retd Professor, Botany, DSB College) Dehra Dun, India for encouragement and useful suggestions.

REFERENCES

- Champion HG, Seth SK. 1968. A revised survey of the forest types of India. Delhi: Manager of Publications.
- Jadhav D. 2016. Traditional seed therapy among bhils of Ratlam district of Madhya Pradesh, India. *Ethnobot* **28**: 77-81.
- Jadhav D. 2017. The origin and significance of vernacular plant names in Ratlam district of Madhya Pradesh, India. *Phytotaxon* **17**: 132-135.
- Jadhav D. 2018. Medicinally important weed plants of Ratlam district, Madhya Pradesh, India. *J Trop Fores* **34**: 72-84.
- Jadhav D. 2019. Traditional therapeutic usage of wild flowers by bhils of Ratlam district, M.P., India. *J Med Arom Pl Sci* **41**: 64-67.
- Jain SK. 1981. Glimpses of Indian ethnobotany. Oxford and IBH publishing Co., New Delhi. pp 1-294.
- Jain SK. 1991. Dictionary of Indian folk Medicine & ethnobotany. Deep publication, New Delhi, pp 1-311.
- Jain SK. 2002. Bibliography of Indian Ethnobotany. Scientific Publishers, Jodhpur. pp 1-144.
- Jain SK. 2004. A Manual of Ethnobotany. Scientific Publisher, Jodhpur. pp 1-193.

- Mudgal V, Khanna KK and Hajra PK. 1997. Flora of Madhya Pradesh. Vol. II. BSI. Calcutta.
- Paudel S, Rana RM, Paudel S, Giri PM and Chaudhery D. 2018. Review on medicinal plants used for treatment of dog bite. *World J Pharm Pharmaceutic Sci* **7**: 498-510.
- Singh NP, Khanna KK, Mudgal V and Dixit RD. 2001. Flora of Madhya Pradesh, Vol.-III. BSI, Calcutta.
- Verma DM, Balakrishnan NP and Dixit RP. 1993. Flora of Madhya Pradesh, Vol.-I. BSI, Calcutta.