

Ethnomedicinal uses of plant latex in the treatment of various ailments by Bhils of Ratlam district of Madhya Pradesh

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ABSTRACT

The present paper provides information on ethnomedicinal uses of latex obtained from eleven flowering plants in an area inhabited by Bhil tribe of Ratlam district (M.P.). The 11 plant species can be grouped under 7 genera belonging to 6 families. The botanical names followed by local names, family, VSN, the method of preparation of drug and mode of application of the plants are enumerated here.

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INTRODUCTION

Ratlam District lies in the western part of the Malwa Plateau in 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 1214536 persons according to 2001 Census. The district is administratively divided into 6 Tahsils of Ratlam, Sailana, Jaora, Piploda, Bajna and Alot. There are 1051 inhabited villages in the district. 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.

During extensive field trips in some tribal inhabited villages of the district the author recorded new and interesting ethnomedicinal uses of plants by the tribals. Ethnobotany has introduced numerous little-known or unknown uses of plants [6,7,8,9]. The author is engaged in an exhaustive ethnomedicinal investigations in this district, and some of the findings have already been published [1,2,3,4] earlier. The present paper provides information on some ethnomedicinal uses of plant latex effectively used in various ailments by Bhil tribe of Ratlam district (M.P.).

MATERIALS AND METHODS

Latex as found in nature is a milky fluid in 10% of all Angiospermic plants. It is a complex emulsion consisting of alkaloids, gums, oils, proteins, resins, starches, sugars and tannins that coagulate when exposed to air. It offers a widespread defence to plants against natural enemies. A literature-based summary of latex-producing angiosperms shows records in 40 families and more than 20,000 species are estimated to bear laticiferous structures of some kind. In order to find out the ethnomedicinal importance of latex produced by a large number of plant species, present study was made on bhil tribe of Ratlam district (M. P.). Ethnobotanical survey was conducted in 52 different tracks in the forest areas of Ratlam district and more than 300 ethnomedicinal plants were recorded. Ethnomedicinal usage of latex obtained from 11 plant species is discussed here. 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' was contacted and is 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. 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 a medicinal plant. Herbarium specimens prepared following the standard method [5] have been deposited in the herbarium of Botany department, Govt. PG Arts & Science College, Ratlam (M.P.). Herbarium specimens were identified with the help of standard Floras [10, 11, 12].

RESULTS

Plant species are enumerated alphabetically with their botanical names, family, local names, VSN and folklore claims as summarized below.

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

Latex of leaves is used as ointment to cure backache and swelling. Two drops of latex are dropped in ripe fruit of Banana (*Musa paradisiaca*) and eaten alternate day early in the morning to cure jaundice. Latex is also applied to remove thorn from body. Latex obtained from leaves is filled in the endosperm of ripe, dried fruit of *cocos nucifera* through hole. The hole is plugged with the removed piece of the fruit and the fruit is roasted in the burning cow dung. After the fruit is roasted, it is made into a powder. A teaspoonful of powder with cow milk is taken in early morning to cure Asthma. Latex is also applied in the case of scorpion sting, on boils, cuts/injury, wound and blisters in cattle. It is also filled in teeth cavity with the help of cotton plug to cure toothache. It is also applied as ointment on blisters and wounds to remove external worms in cattles.

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

Latex of leaves is used as ointment to cure backache and swelling and for removing thorn from body. Latex is also applied on wounds and boils and against scorpion sting. Latex is also applied as ointment in the case of corn and it is mixed with wheat flour (*Triticum aestivum* L.) and small pills are prepared, these pills are taken in the case of dog bite.

Carica papaya L. (Caricaceae), 'Aran kakdi', DJ-119

Latex is filled in teeth cavity with the help of cotton plug to cure toothache and swollen gums.

Euphorbia hirta L. (Euphorbiaceae), 'Dudhi'. DJ-59

Extract of plant is given to lactating mothers for increasing milk secretion.

Euphorbia neriifolia L. (Euphorbiaceae), 'Ghotla thuwar', DJ-27

Latex is filled in teeth cavity with the help of cotton plug to cure toothache.

Ficus benghalensis L., (Moraceae), 'Vadlo', DJ-93.

Two drops of the latex obtained from leaves are put in a Batasa (Spherical spongy sugar cake) and

eat to treat Ascariasis infection. Latex of leaves is also mixed with wheat flour (*Triticum aestivum* L.) and small pills are prepared. One pill taken every day early in the morning for 7 days with cow milk to check undesirable discharge of semen with urine. Five drops of the latex obtained from leaves are put in a Batasa (Spherical spongy sugar cake) and eat to prevent premature ejaculation. Latex is also applied over the soles of the feet to prevent cracking. Few tribals also use latex to cure conjunctivitis.

Ficus carica L. (Moraceae), 'Anjir', DJ-362

The latex is applied on the affected areas daily once for 3 days to cure ringworm.

Ficus glomerata Roxb. (Moraceae), 'Gulri', DJ-81.

Two drop of stem or leaf latex is dropped in sugary sweet "batasha" and eaten to cure diarrhoea and mouth ulcer.

Ipomoea carnea Jacq. Subsp. ***fistulosa*** (Mart. ex Choisy) Austin. (Convolvulaceae), 'Besharam', DJ-30

Latex is applied against scorpion sting.

Jatropha curcas L. (***Euphorbiaceae***), 'Ratanjot', DJ-31

A drop of latex is put in the ear to check pus formation. It is also applied on cuts and injury to check bleeding.

Opuntia elatior (Willd.) Mill. (Cactaceae), 'Hasla thuwar', DJ-189

Two tea spoonful latex is taken with water and applied in cases of dog bite.

DISCUSSION

This paper provides some new uses of latex obtained from 11 ethnomedicinal plants used by Bhil tribe of Ratlam District (M.P.) for the treatment of diarrhoea, toothache, scorpion sting, dog bite, ascariasis, skin diseases, jaundice, backache, and eye and mouth diseases. Many of the folk medicines reported in this communication are based on single plant species, while in some cases a mixture of species is used. They may also be used along with

certain additives. Information on the effectiveness to cure the ailments by using these species in different combinations is based on continuous use by succeeding generations of local tribal inhabitants. However, these recipes need to be further tested using standard scientific methodologies. This will enrich our knowledge on the folklore uses and may lead to opening up of ways for effective utilization of herbal medicines in future.

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