



ETHNOMEDICINE OF SOME PTERIDOPHYTES USED BY THE PRIMITIVE TRIBAL GROUPS OF VISAKHAPATNAM, ANDHRA PRADESH

Koteswara Rao. J*¹, Saivenkatesh Korlam², M. Reddi Naik³

^{1,2}Lecturer in Botany, Govt. Degree and PG College, Puttur, Tirupati district, A.P.

³Lecturer in Commerce, Govt. Degree and PG College, Puttur, Tirupati district, A.P.

*Corresponding Author

Article DOI: <https://doi.org/10.36713/epra12608>

DOI No: 10.36713/epra12608

ABSTRACT

The present study deals with 9 species of pteridophytes as many as genera and families used for various diseases by the primitive tribal groups of Visakhapatnam district, Andhra Pradesh. Plant part wise analysis, root is used in 10 practices followed by leaf and whole plant 3 each. Out of 16 practices 8 practices and one plant species were found to be new.

KEY WORDS: Ethnomedicine, Pteridophytes, Visakhapatnam, Andhra Pradesh.

INTRODUCTION

Tribes in India have their own way of living within social and cultural moorings, purely governed on the basis of local conditions and ethos. The term “tribes was first included in the Government of India Act 1935. Article 342 of the Constitution of India defines ‘tribes’ as “an endogamous group with an ethnic identity; who have retained their traditional cultural identity; they have a distinct language or dialect of their own; they are economically backward and live in seclusion, governed by their own social norms and largely having a self-contained economy.” The term ‘Primitive tribes’ was first used by western anthropologists to represent, “a primary aggregate of people living in a primitive or barbarous conditions under a headman or chief”. The primitive tribes are placed in the most disadvantageous position in modern India.

The study area includes 11 mandals of the Visakhapatnam district. It lies between 17°-34' 11" and 18°-32' 57" northern latitude and 18°-51' 49" and 83°-16' 9" eastern longitude. The entire agency track covers 6, 298 Km² i. e., 56.4% of the total geographical area of the district. The annual temperature ranges from 33.7° C (April-May) to 9.8° C (December-January) and the average elevation is about 1200 m above MSL. A detailed investigation on plants associated with Primitive Tribal Groups (PTGs) is taken up with the objectives of an extensive and intensive exploration studies in the areas of PTGs habitations. The PTG communities present in the study area are Gadaba, Khond, Porja and Savara. The present study was carried out in 11 mandals viz., Chintapalli, G.Madugula, G.K.Veedhi, Koyyuru, Hukumpeta, Pedabayalu, Dumbriguda, Munchingput, Araku valley and Ananthagiri. The total population of the study area is 38, 32, 336 (as per 2001 census). The total tribal population is 5, 57,572 (14.55%) and PTGs population is 1, 26, 778 (3.30%).

Some ethnomedicinal studies published in literature on ethnomedicine of pteridophytes (Rao et.al. 2007, Upreti et.al. 2009, Karthik et.al. 2011, Shaikh et. al. 2014, Singh and Upadhyay 2014, Rout et.al. 2019, Suraj et.al. 2020, Das and Patra 2021).

MATERIAL AND METHODS

The ethnobotanical survey was conducted during 2008-2012 covering the eleven mandals of the study area and interviews were conducted with the tribes at their habitats. During oral interviews with elder people, medicine men in the tribal area collected first hand ethnomedicinal uses, mode of preparation and administration of medicine. Each medicinal practice was cross checked with at least 3-4 informants. During field survey information was gathered on plants used for various ailments. In 95 pockets of the study area, 139 *vaidhyas* and practitioners were consulted. The specimens were identified with the help of standard floras (Gamble, 1915-1935 and Rao and Kumari, 2008). The voucher specimens were deposited in the Herbarium of the Department of Botany, *Andhra University*, Visakhapatnam.

RESULTS AND OBSERVATIONS

Nine species of pteridophytes as many as genera and families used by the primitive tribal groups of Visakhapatnam district to cure various human ailments and their daily needs. The common ailments treated by them are allergy, cooling effect, cough, Dysentery, epilepsy, fever, Fever for children, fits, Headache, piles, Post-partum problems, prolapsed of uterus, conjunctivitis. A total of 16 practices were recorded. Plant part wise analysis, root is used in 10 practices followed by leaf and whole plant 3 each. *Hemionitis arifolia* and 9 practices were found to be new (Jain 1991 and Kirtikar and Basu, 2003). The plants are arranged in an alphabetical order with botanical name followed by family, vernacular name,



voucher specimen number, method, mode and duration of the treatment. Plants and practices marked with an asterisk (*) are considered to be new or less known.

Adiantum philippense Linn. Adiantaceae Challi 9079

*Allergy: Root paste mixed with 50 ml of water is administered daily twice till cure.

*Cough: Root paste along with leaf paste of *Centella asiatica* mixed with water is administered twice a day for 3 days.

*Epilepsy: Root paste mixed with half tea glass of water is administered twice a day till cure.

*Fever with shivering: Root paste mixed with half tea glass of water is administered twice a day till cure.

*Piles: Root paste mixed with half tea glass of water is administered twice a day for 3 days.

Cyathia gigantea (Wall. ex Hook.) Halittum Cyathiaceae Peddakoti 9541

Fever: Root paste mixed with half tea glass of water is administered twice a day for 3 days.

Didymocarpus pygmaea Clarke Gesneriaceae Osso 9081

Prolapse of uterus: Root paste mixed with half tea glass of water is administered twice a day till cure.

Drymaria cordata (Linn.) Willd. ex Roem. & Schult.

Caryophyllaceae Ankidukki osso 9268

Conjunctivitis: Two drops of leaf juice is poured into the eyes before go to bed for a week.

Cooling effect: Fifty g of leaf paste is administered with half tea glass of water twice a day for 2 days.

Drynaria quercifolia (Linn.) J. Smith Polypodiaceae

Rachilaka mandhu 9355

*Fits: Root paste along with root paste of *Solanum indicum* is given in doses of 10 g tablets twice a day for 4 days.

*Post- partum problems (Body swellings): Root paste mixed with half tea glass of hot water is administered twice a day for 3 days to women to reduce body swellings after delivery.

Equisetum debile Roxb. Equisetaceae Bedda kandhiri 9244

*Dysentery: Root paste mixed with half tea glass of water is administered daily twice.

Hemionitis arifolia (Burm. f.) Moor Adiantaceae Kenneris 9308

Cough: Fifty g of leaf paste is administered daily twice.

Lygodium flexuosum (L.) Sw. Schizaeaceae Khorothi 9293

*Headache: Whole plant paste mixed with water is used during head bath or plant paste mixed with half tea glass of water is administered orally daily twice.

Marsilea quadrifolia Linn. Marsiliaceae Chenchalam koor 9240

Fever for children: Whole plant ground with leaves of *Artemisia vulgaris* is applied with coconut oil all over the body before going to bed.

Allergy: Whole plant paste is applied with castor oil all over the body till cure.

CONCLUSION

Many reports have appeared on the medicinal values of various plants, including pteridophytes and new active compounds have been isolated from different parts of the plants. Over the last decade or so, World Health Organization has passed a number of resolutions in response to a resurgence of interest in the study and use of tradition of health systems. Many developing countries have decided to take traditional forms of medicine more seriously and to explore the healthcare (WHO, 1993). However, due to soil erosion by contribution of gradient of the slopes, deforestation, nature of soil and quantum of *podu* cultivated land, etc. in the district, some species are likely to be endangered and need conservation. There is need to record ethnomedicinal uses of such plants before they are lost. However, the tribal groups about medicinal uses of plants need to be scientifically validated for future use in pharmaceutical industry. Such information is likely to help in the conservation of biodiversity and providing important lead for drug development.

There is a need for scientific validation of these practices and their efficiency, credibility and applicability need to be established through phytochemical, pharmacological and clinical screening.

Acknowledgements

The authors are grateful to the primitive tribal groups of Visakhapatnam district for sharing their valuable knowledge on ethnomedicine and help during field work.

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