

## Research Article



## Medicinal Plants Used for Sexual and Reproductive Problems by Kol Tribe in Sidhi District, Madhya Pradesh, India

Prachi Singh<sup>1</sup>, Sanjeev Kumar Maurya<sup>1,2\*</sup>, Gaurav Nigam<sup>1</sup>

<sup>1</sup>Department of Botany, Institute of Basic Sciences, Bundelkhand University, Jhansi – 284128, Uttar Pradesh, India.

<sup>2</sup>Plant Biochemistry and Plant Physiology Lab., Dept of Plant Science, M. J. P. Rohilkhand University, Bareilly, Uttar Pradesh, India.

\*Corresponding author's E-mail: [mauryasanjeev15@gmail.com](mailto:mauryasanjeev15@gmail.com)

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### ABSTRACT

System of traditional medicine practices is well used system both in developing and developed countries due to their natural origin. Ethnobotanical documentation is one way of capturing this traditional knowledge from the tribal people and traditional healers. An Ethnobotanical survey was conducted on the medicinal plants frequently used for the administration of sexual and reproductive problems in Sidhi district, Madhya Pradesh by tribal healers. This paper deals with the medicinal uses of 29 plant species of 26 genera belonging to 21 plant species.

**Keywords:** Ethnobotanical documentation, traditional knowledge, medicinal plants, Sidhi district, Madhya Pradesh.

### INTRODUCTION

Different ethnic groups existing different geographical belts of the world possess empirical knowledge about the utilization of local flora of that area on which they are immediately and intimately dependent for their basic requirements. The ethnic communities have their own pool of secret ethnomedicinal knowledge about the plants available in their surroundings which has been serving them with its superiority.<sup>1-4</sup> India has the second largest tribal population in the world after Africa. The tribal people mostly depend on forests for their livelihood. Plants and their parts are not only used as food and medicine but also used in various tribal rituals that are a part of their social and religious life.

Plants have always been the source of medicines and have many uses to mankind. Some people realize that plants are an important part of our environment.<sup>5</sup> The convenient botanical knowledge of plants and their uses by indigenous culture are not only valuable for conservation of cultural traditions, but also for community healthcare and augmentation in the present and future. The tribals have developed their own traditional ways of diagnosis and treatment of diseases and fulfill their basic requirements in this regard from the nearby forest. As a consequence of this long experience and practice, it has become an effective way of accumulation of rich knowledge on medicinal plants and usage of other natural resources among them.<sup>6</sup> Hence, the ethnomedicine is the mother of all modern drugs and recently the importance of the traditional knowledge based medicines are being utilized throughout the world.<sup>7</sup>

The curative prospective of the medicinal plants has been accredited to lay in the chemical constituents that inducing particular physiological action on the human

body. Invariably the bioactive compounds could be alkaloids, flavonoids, tannins and phenolic compounds though neither the chemical nature nor its physiological action in the traditional system of medicine is scientifically defined. However, it is interesting to note that the ethnomedicinal uses of plants is one of the most successful criteria used by the pharmaceutical industry in finding new therapeutic agents for the various fields of biomedicine.<sup>8</sup>

Sidhi district of Madhya Pradesh lies on the Vindhyan plateau between 24° 42' N latitude and 81° 88' E longitude and about 272 meters above the sea level. The total area in the district is 10,536 square kilometer of which about 40% of the land is forest. The climate of the area is tropical. The average annual rainfall is about 900 mm which is received largely in July and August from southwest monsoon. The highest mean maximum temperature is 42°C recorded in May-June and the mean minimum temperature is 8.1°C recorded in January-February. The soil of this region varies considerably but most of the area has red lateritic soils with often-pronounced nodules locally called "Murrum". Deep and fertile soils are often found in the valleys between folds of hills where the soil washed from hill slopes has accumulated. Hence, the topography presents a contrast from bare rocky lands alternating with good deep soils.

### MATERIALS AND METHODS

The ethnobotanical data were obtained from the people of Kol tribe residing in different parts of the Sidhi district. Information on local name of plants, plant part used for curing, method of dosage and administration were recorded. The ethnobotanical data were collected according to the methodology suggested by Jain and Goel.<sup>9</sup> Plants were collected with the help of floristic literature.<sup>10</sup> Herbarium was prepared as per standard



protocol as described by Dwivedi and Pandey, and Varghese.<sup>11-12</sup>

## RESULTS AND DISCUSSION

A number of tribal villages Rampur, Majhiluli, Kusmi, Sihawal, Devsor, Chitrangi and Waidhan have been visited

for the collection of data from the Kol tribal community (Table – 1). The study revealed that the study is rich in ethnomedicobotanical diversity. The tribal people use locally available plant species for the treatment of various sexual and reproductive problems.

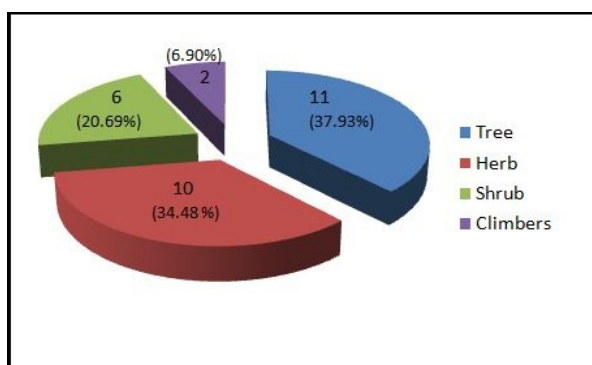
**Table 1:** Enumeration of plants used for the various sexual and reproductive problems in the study area

| S. No. | Botanical Name                                  | Common Name | Family         | Ethnomedicinal uses   |
|--------|---|-------------|----------------|---|
| 1      | <i>Abutilon indicum (L.) Sweet.</i>             | Atibala     | Malvaceae      | Take 5-6 g dry seed powder with 1 cup milk or water daily twice for gonorrhoea.   |
| 2      | <i>Acacia nilotica (Linn.) Willd. ex Delle</i>  | Babul       | Mimosaceae     | Take 3-5 g of bark powder with 1 cup of water in morning, it is used for urinary and vaginal discharges.  |
| 3      | <i>Asteracantha longifolia (L.) Nees.</i>       | Talmakhana  | Acanthaceae    | 5 gm seed powder and equal amount of sugar taken with 1 cup of boil milk daily night for sexual debility.   |
| 4      | <i>Azadirachta indica (Linn.) A. Juss.</i>      | Neem        | Meliaceae      | 8-10 ml leaves juice given to a woman in labour before childbirth contraction in the uterus and prevents possible inflammation.   |
| 5      | <i>Butea frondosa Roxb.ex Willd.</i>            | Palas       | Fabaceae       | Fine powder of one seed mixed with ghee and honey in equal amount and makes paste and applied in vagina in menstrual cycle to prevent conception.   |
| 6      | <i>Cissus quadrangularis L.</i>                 | Hadjod      | Vitaceae       | Take juice of tuber with sesamum oil for irregular menstruation.  |
| 7      | <i>Clitoria ternatea L.</i>                     | Aprajita    | Fabaceae       | Root powder consumed with milk in burning of vagina and to prevent abortion.  |
| 8      | <i>Curculigo orchoides Gaertn.</i>              | Kali musli  | Hypoxidaceae   | Take 3-6 gm rhizome powder with 1 cup boil milk in the night for sexual debility.   |
| 9      | <i>Cynodon dactylon L. Pers.</i>                | Doob        | Poaceae        | The juice of the plant mixed with honey, 2-3 times a day for a few days is found effective in menorrhagia.  |
| 10     | <i>Diospyros tomentosa Roxb.</i>                | Tendu       | Ebenaceae      | Dried flowers are useful in urinary diseases.   |
| 11     | <i>Eclipta alba (L.) Hassk.</i>                 | Bhringraj   | Asteraceae     | 1 g leaves powder is taken with a cup of water once a day for 2 days in menorrhagia.  |
| 12     | <i>Ficus benghalensis L.</i>                    | Bargad      | Moraceae       | One teaspoon bark paste mixed with honey is given once a day to cure leucorrhoea.   |
| 13     | <i>Ficus glomerata Roxb.</i>                    | Gular       | Moraceae       | Take 1 teaspoon fruit powder with milk or water taken orally once a day to cure menorrhagia and leucorrhoea.  |
| 14     | <i>Ficus religiosa L.</i>                       | Peepal      | Moraceae       | 1 teaspoon paste of bark mixed with water used once a day to facilitate abortion up to 3-4 months of pregnancy. It also induces sterility in women.   |
| 15     | <i>Gloriosa superba L.</i>                      | Kalihari    | Colchicaceae   | The roots are crushed to make paste and externally applied on palms, soles, lower abdomen, lumbar region and vagina to ease or accelerate the process of delivery and expulsion of placenta without pain. |
| 16     | <i>Grewia hirsuta Vahl.</i>                     | Mahabala    | Tiliaceae      | Root paste is given orally with water once a day for the treatment of excess discharge of semen with urine.   |
| 17     | <i>Hemidesmus indicus (L.) R. Br.</i>           | Anantmula   | Asclepiadaceae | 50 g root powder, boiled in 500 ml water, till it becomes 100 ml, this decoction is given once a day for 3-4 days to check excess menstruation.   |
| 18     | <i>Hibiscus rosa-sinensis L.</i>                | Gudhal      | Malvaceae      | Crush bark and filter. 15 ml of filtrate is given to women continuously for 7 days for abortion.  |
| 19     | <i>Madhuca longifolia (J. Konig) J.F.Macbr.</i> | Mahwa       | Sapotaceae     | 20-25 g flower is boiled in 250 ml milk and given once a day, in sexual debility.   |
| 20     | <i>Melia azadirach L.</i>                       | Mahaneem    | Meliaceae      | Dry seeds and sandal wood mixed in equal amount and powdered. Take 8-10 g powdered mixture with 5 g sugar with water twice a day in leucorrhoea.  |
| 21     | <i>Mimosa pudica L.</i>                         | Lajavanti   | Mimosaceae     | Take leaf juice with one cup of water twice a day for leucorrhoea.  |
| 22     | <i>Phyllanthus niruri L.</i>                    | Bhumi Amla  | Euphorbiaceae  | Root paste mixed with rice water, it is used in gonorrhoea.   |

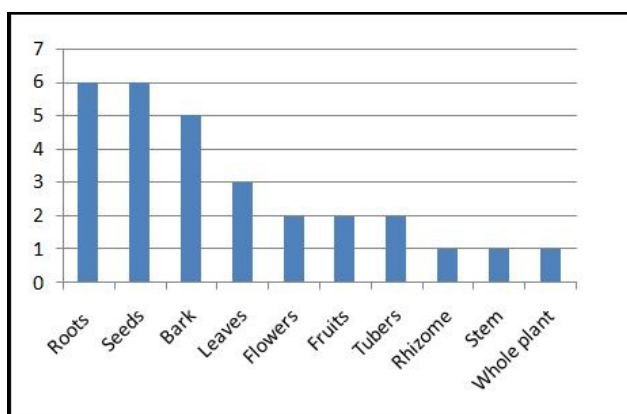


|    |   |              |                |  |
|----|---|--------------|----------------|--|
| 23 | <i>Pueraria tuberosa</i> (Willd.) DC.         | Vidarikanda  | Fabaceae       | Take 10 g powder of tubers with 1 cup of milk, once a day to treat leucorrhoea.  |
| 24 | <i>Terminalia arjuna</i> (Roxb.) Wight & Arn. | Arjuna       | Combretaceae   | The decoction of arjuna bark and <i>Anogeisus latifolia</i> (Dhava) is effective in spermatorrhoea.  |
| 25 | <i>Terminalia bellirica</i> (Gaertn.) Roxb.   | Bahera       | Combretaceae   | Take paste of one seed per day to cure sexual debility in men.   |
| 26 | <i>Tinospora cordifolia</i> (Willd.) Miers.   | Gilo         | Menispermaceae | About 3-4 g stem decoction with cold or hot water taken empty stomach in the morning useful in sexual debility in men.   |
| 27 | <i>Tribulus terrestris</i> L.                 | Chota gokhru | Zygophyllaceae | Powdered fruits are taken with water in urine disorders.   |
| 28 | <i>Vitex negundo</i> L.                       | Nirgundi     | Verbenaceae    | Mix nirgundi seed powder and dry ginger ( <i>Zingiber officinale</i> ) in equal amount. 10 g of mixture is given orally with milk for the treatment of spermatorrhoea. |
| 29 | <i>Withania somnifera</i> (L.) Dunal.         | Ashwagandha  | Solanaceae     | Take 5g ashwagandha root powder with 250g milk, once a day, to cure leucorrhoea.   |

The 29 plant species enumerated in present study belongs to 26 genera and 21 families out of which trees are dominated with representation of 11 plants species (37.93%) which is followed by herbs with 10 (34.48%), shrubs with 6 (20.69%) and climbers with 2 (6.90%) plant species (Figure – 1). Out of total 21 families Fabaceae and Moraceae are dominating (with 3 plant species each) followed by Combretaceae, Malvaceae, Meliaceae and Mimosaceae (with 2 plant species each). The rest 15 families are represented by single plant species in the study area. In terms of plant parts used roots and seeds (of 6 plant species each) are most frequently used plants parts which are followed by bark (of 5 plant species), leaves (of 3 plant species), flower, fruit and tuber (of 2 plant species each) etc. (Figure – 2).



**Figure 1:** Ethnomedicinal plant species recorded under sexual and reproductive problems from tribal healers.



**Figure 2:** Plant parts used for medicinal purposes.

A majority of remedies are prepared in the form of powder (14 species, 48.28%) followed by paste (7 species, 24.14%), extract (5 species, 17.24%) and decoction (3 species, 10.34%) from freshly collected plant parts or prepared after drying. The study reveals that the people of the Kol tribes used different plant species for leucorrhoea, sexual debility, gonorrhoea, menorrhagia, menstruation, spermatorrhoea and urinary disease etc. 6 species for leucorrhoea; 5 species for sexual debility; 2 species each for gonorrhoea, menorrhagia, menstruation, spermatorrhoea, abortion and urinary disease; 1 species each for vaginal discharge, inflammation, conception, induce sterility, delivery problem and semen discharge.

## CONCLUSION

It was observed that some tribal healers in the study areas have been taken measures for the conservation by domesticating some of the medicinal plants. The main aim to minimize the labor of collection from the forests which are not easily available but are important for their daily life in the treatment of different disease and few plant species are protected by worship of God. It was also noticed that they never take off the whole plant for the use; they leave some reproductive parts of plants for regeneration.

It was also observed that traditional association of tribes with forests helps in the conservation of some of the medicinal plants and to retain the knowledge of medicinal plants. However in the study areas, industrialization, road constructions and urbanization leads to the loss of biodiversity and some of the plants have become threatened and facing acute problem of extinction. So there is need to conservation of medicinal plants and also need conservation and documentation of aboriginal knowledge of process involved in the preparation of medicines.

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