

An Ethnobotanical Study of Medicinal Plants in Shahdol District of Madhya Pradesh, India

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Abstract: *Shahdol district is known as one of the tribal district of Madhya Pradesh where 54 percent of total populations belong to tribal community. Gond, Panika, Bhariaand, Muria, Kol and Baiga are the main tribals of study area and totally dependent on medicinal plants for their daily health care need. Present paper deals with 80 ethnomedicinal plants which are belong to 70 genera and 45 families used for 34 types of diseases.*

Keywords: Ethnomedicine, Shahdol District, Tribals, Ethnomedicinal plants, Madhya Pradesh

1. Introduction

India has rich heritage of knowledge on plant based drugs both for use in preventive and curative medicines. Besides the classical work of the "Atharva Veda", ancient Indian scholars like "Charak", "Sushrita" and others produced remarkable description of Indian medicinal plants. They described the properties of medicinal plants and preparation in such details that most of the plants and their preparation are still held in high repute in the medical profession. In fact, our Ayurvedic system of medicine is predominantly a plant-based *Materia-medica*, making use of most of our native plants to make the health care cheap and acceptable.



Map 1: Location map of Madhya Pradesh and study area of Shahdol.

Shahdol District is situated in the northeastern part of the Madhya Pradesh provinces of India. Because of the division of the district on 15-08-2003, the area of the district remains 5671 km². It is surrounded by Anuppur in the southeast, Satna & Sidhi in the north and Umaria in the west. The district extends 110 km from east to west and 170 km from north to south. This district is situated between 22°38' N latitude to 24°20' N latitude and 80°28' E Longitude to 82°12' E longitude. The District is located in the north-eastern part of the Deccan Plateau.

Literature survey of Medico-ethno botanical work done in Madhya Pradesh was done (Jain, 1962 and 1963; Bhalla *et al.*, 1986; Bhattacharya *et al.*, 2004; Maheshwari *et al.*, 1986; Mudgal *et al.*, 1997; Singh *et al.*, 2001; Roy, 2000; Rai *et al.*, 1992,1993,1989,2000; Saxena *et al.*, 1971; Mishra *et al.*, 1994; Jadhav, 2006, 2007, 2008, 2009, 2010, 2011; Diwanji, 2011; Verma *et al.*, 1993 and Wagh *et al.*, 2010, Wagh and Jain 2014, Bala and Singh, 2015). The present communication gives result of ethno botanical covering 80 herbal remedies uses against various disorders medicinal plants used by tribals of Shahdol district.

2. Materials and Methods

Ethnobotanical surveys were conducted during the years 2014-2015 in the tribal pockets of Shahdol district Madhya Pradesh. The Tribals madicineman "Ojha" keep secrecy about medicinal plants uses of the stomach disorders, skin disease, aphrodisiacs, fever, tonic, ulcer, asthma, snake-bite, respiratory disease, leucorrhoea, dandruff, eye-disease and diabetes. The first hand information on folklore uses of plants was gathered along with the mode of administration, therapeutic uses and dosages from tribal medicine men.

The tribal medicine men were taken to the forests where they pointed out the plants being used for treating the disease. During the course of field study, knowledgeable persons such as old tribal men were approached and specific questionnaire were asked about the plants and their traditional uses. The data regarding uses of ethnomedicinal plants has verified and cross checked (Kirtikar and Basu, 1993; Chopra, 1956 and Jain, 1993). Herbarium specimens were prepared following the standard method (Jain and Rao, 1978) and Deptt. of Pt. S.N.S. Govt. P.G. College, Shahdol, Madhya Pradesh.

3. Enumeration

In the following enumeration, the plant species are arranged alphabetically order with their scientific names, family, local name & vernacular names, tribal uses and a brief note on medicinal plant parts used and mode of utilization and dosage.

Table 1: Medicinal plants of Shahdol district and their medicinal utility.

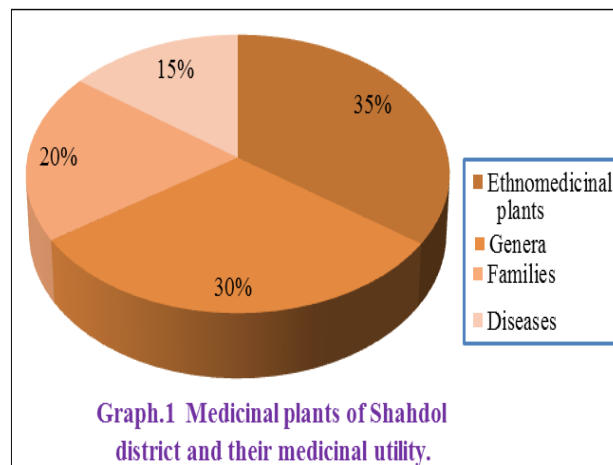
S. No.	Plants name & Family	Local Name	Medicinal uses
1.	<i>Adansonia digitata</i> L., (Bombacaceae)	Gorakh Imali	The dried pulp of the fruit (about half teaspoon) has effect on body cooling and also given as appetizer and to treat stomach pain.
2.	<i>Adhatoda zeylanica</i> Medik. (Acanthaceae)	Adusa	Decoction of leaves is taken orally (About 2 teaspoons) 2-3 times daily in bronchitis.
3.	<i>Andrographis paniculata</i> wall. Ex. Nees. (Acanthaceae)	Kalmegh;	Whole plant is boiled in water and the filtrate (About 2 teaspoons) is given for three-five days to treat malaria.
4.	<i>Achyranthes aspera</i> Linn, (Amaranthaceae)	Chitchita	The root pest given internally in hydrophobia, fever, anaemia and night blindness, specific in piles and paste of leaves in sukha roge.
5.	<i>Abelmoschus manihot</i> (L.) Medik., (Malvaceae)	Jangli bhendi	Root extract given internally for a long duration in case of male impotency.
6.	<i>Aegle marmelos</i> (L.) Corr., (Rutaceae)	Bel	The pulp of ripe fruit is used in stomach disorders.
7.	<i>Aloe vera</i> (L) Burm.f., (Liliaceae)	Ghratkumar	The succulent leaves are crushed and mixed with turmeric and the paste is applied on the eruptions on any part of the body.
8.	<i>Amorphophallus campanulatus</i> Blume: ex DC. (Araceae)	Suran	The tubers are crushed and applied in cases of snake bite.
9.	<i>Anogeissus latifolia</i> (Roxb. Ex DC.) Wall (Combretaceae)	Dhawa	Fried gum is useful in spermatorrhoea.
10.	<i>Asparagus racemosus</i> Willd. (Liliaceae)	Satawari	The root paste mixed with water is given in the morning upto 15 days to increase the potency and Typhoid. The root juice (teaspoons) is taken orally with milk to cure general fever.
11.	<i>Azadirachta indica</i> (Linn.) A. Juss. (Meliaceae);	Neem	It is believed that on brushing the teeth daily with the stick, the body becomes resistant against snake bite and bathing to cure skin afflictions.
12.	<i>Annona squamosa</i> L. (Annonaceae)	Sitaphal	Seed powder is used as abortifacient.
13.	<i>Argemone mexicana</i> L. (Papaveraceae)	Peli kateli	Small pieces of roots are chewed with a leaf of Paan (Piper betle) in jaundice.
14.	<i>Ailanthus excelsa</i> Roxb. (Simaroubaceae)	Maharukh	Stem of crushed leaves inhaled in tetanus, leaf decoction given internally as long treatment for joint pains.
15.	<i>Biophytum sensitivum</i> DC. (Oxalidaceae)	Lajwanti	The leaf powder is given to decrease sexuality.
16.	<i>Boerhavia diffusa</i> Linn. (Nyctaginaceae)	Purnava	The root paste is given in cases of blood dysentery two times a day, in empty stomach and the urinary disorders.
17.	<i>Bombax ceiba</i> Linn. (Bombaceae)	Semal	The roots of young seedlings are chewed for more vitality. The flowers are also given against semen discharge.
18.	<i>Butea monosperma</i> (Lamk.) Taub. (Fabaceae)	Palash	Leaf juice is extracted with water, strained and given in diabetes. The roots are chewed in the cases of male impotency.
19.	<i>Caesalpinia bonducella</i> (Linn.) Roxb. (Caesalpiniaceae)	Gattaran	The seed powder is given to ladies against bleeding.
20.	<i>Calotropis gigantea</i> (Willd.) Ait, (Asclepiadaceae)	Safed Akwan	The milky latex is applied on the inflamed parts of the body to reduce pain and swellings.
21.	<i>Calotropis procera</i> (Ait.), (Asclepiadaceae)	Akwan	Leaves are heated a bit and tied over swelled body part.
22.	<i>Careya arborea</i> Roxb. (Lecythidaceae)	Kumbhi	The leaf paste is applied on the face to reduce the swellings.
23.	<i>Carissa congesta</i> Wt. (Apocynaceae);	Karonda	The juice of root bark is given in fever.
24.	<i>Cassia glauca</i> Lamk. (Caesalpiniaceae)	Kamarsothi	The beads made from wood are hanged in neck to cure jaundice.
25.	<i>Cassia fistula</i> L., (Caesalpiniaceae)	Amaltas	The fruit pulp is given in diabetes as a long term treatment.
26.	<i>Caesalpinia bonduc</i> (L.) Roxb. (Caesalpiniaceae)	Gattar	The stem bark paste is eaten to Stomach pain.
27.	<i>Celastrus paniculatus</i> Willd. (Celastraceae)	Malkangni	The seed oil is used as massage oil in the cases of leprosy and bodyache.
28.	<i>Centella asiatica</i> (Linn.) Urb. (Apiaceae)	Brahmi	The decoction of the plant is given against discharge of yellowish urine.
29.	<i>Chlorophytum arundinaceum</i> Baker. (Liliaceae)	Safed musli	Root is taken as an aphrodisiac, Diarrhoea, Menstrual disorders and Tonic.
30.	<i>Cissus quadrangularis</i> (Linn.) (Vitaceae)	Hadjod	The entire plant Crushed into paste is eaten and applied on bone fracture. The wound heals shortly.
31.	<i>Costus speciosus</i> (Koenig). Sm (Zingiberaceae)	Kanda	The root paste is given to cattle in fever, once a day upto two days.
32.	<i>Croton oblongifolius</i> Roxb. (Euphorbiaceae)	Jangli arandi	The paste made from roots ca 8 cm. long with 1.5 cm. girth is given in dysentery and in vomiting for one or two alternate days.
33.	<i>Crotalaria juncea</i> L. (Fabaceae)	Sann	Fine powder of seeds used in obesity, especially of women.

34.	<i>Curculigo orchoides</i> Gaertn. (Zingiberaceae)	Kali musli	The root paste mixed with ghee is given to increase potency.
35.	<i>Curcuma angustifolia</i> Roxb. (Zingiberaceae)	Haldi	The rhizome paste mixed with milk is given in empty stomach in cases of fever, two times in a day up to seven days.
36.	<i>Dillenia pentagyna</i> Roxb. (Dilleniaceae)	Kelia sag	The stem bark is powdered and mixed with water and after filtration, 'Misri' is added to the filtrate. This mixture is then given to ladies for easy delivery, two times in a day upto three weeks.
37.	<i>Diplocyclos palmatus</i> (L.) C. Jeffrev, Cucurbitaceae	Shivlingi	Fine powder of seeds in milk is used in cases of both male and female sterility.
38.	<i>Euphorbia nerifolia</i> L. (Euphorbiaceae)	Sehund	Latex is mixed with Haldi powder and a paste is prepared, this paste is applied over swelled part of body.
39.	<i>Euphorbia acaulis</i> Roxb. (Euphorbiaceae);	Khargoni	The root paste is small quantity is dissolved in water and is given to animals in dysentery and in fever, only once or rarely two times.
40.	<i>E. hirta</i> Linn. (Euphorbiaceae)	Chotidudhi	The milky latex is rubbed externally on eyes and applied in scorpion bite.
41.	<i>Ficus religiosa</i> Linn. (Moraceae)	Pipal	The young leaves are used in snake bite. It is believed that the leaf petiole when inserted in both the ears sucks poison from the body. About twenty pairs of leaves are used alternatively to take out the poison from the body and ash of stem bark in asthma.
42.	<i>Ficus hispida</i> L., (Moraceae)	Bhui gular	Fruit boiled in goats milk, strained and given in enlargement of liver and also in jaundice.
43.	<i>Ficus racemosa</i> L., (Moraceae)	Gular	Fruits given in diabetes and to check abortion (Ayu.also).
44.	<i>Flacourtia indica</i> (Burm. f.) Merr. (Flacourtiaceae)	Dollar	The root paste is applied externally in skin diseases.
45.	<i>Gloriosa superba</i> Linn. (Liliaceae)	Kalihari	The root and flower paste is used for killing the mouse and birds in crop fields and root paste (half teaspoons) is administered in the pregnancy upto four month.
46.	<i>Gymnema sylvestre</i> (Retz.) R. Br. Ex. Schult. (Asclepiadiaceae)	Gudmar	The tuber powder is applied on Diabetes and Menstrual disorders.
47.	<i>Helicteres isora</i> Linn. (Sterculiaceae)	Maror phalli	The aqueous extract of the seed in small quantity is given to children in dysentery and Root extract is given in fits and diabetes (Ayu. Also.).
48.	<i>Hemidesmus indicus</i> R. Br. (Asclepiadiaceae)	Dudhi	The root paste mixed with water is given in small quantity to children in dysentery.
49.	<i>Holarrhena pubescens</i> Wall. ex G. Don Syn. <i>H. Antidysenterica</i> Wall. ex DC. (Apocynaceae)	Doodhi	The fruit paste is given in stomachache.
50.	<i>Indigofera tinctoria</i> L., (Fabaceae)	Neel	Seed paste soaked overnight in clean water, strained in the morning through a clean cloth. The filtrate is used as eye drops, for a number of days for relief from cataract.
51.	<i>Jatropha curcas</i> Linn. (Euphorbiaceae)	Ratanjot	The stem is used as tooth brush to relieve toothache and gum swelling.
52.	<i>Lawsonia inermis</i> L. (Lythraceae)	Mehandi	The whole plant is crushed and the paste is applied on Boils Burn, Headache, Piles, Rheumatism, Snake bite.
53.	<i>Luffa acutangula</i> (L.) Roxb., (Cucurbitaceae)	Kadvi turai	Fine seed powder inhaled for cure of jaundice. Very clean juice of fruits is used as eye drops in conjunctivitis.
54.	<i>Madhuca longifolia</i> (Koenig) Mac.Bride var. <i>latifolia</i> (Roxb.) Chev., (Sapotaceae)	Mahua	A sweet dish made by boiling the flowers in milk and taken regularly for a long duration to cure male impotency. Bark paste applied externally on tonsils. Seed extract is given internally in diphtheria. The oil cake is burnt inside the room to keep away snakes.
55.	<i>Martynia annua</i> L. (Martyniaceae);	Bichhu	The seed oil is applied in case of eczema.
56.	<i>Momordica dioica</i> Roxb.ex Willd. (Cucurbitaceae)	Paroda	The Seeds are used to remove Kidney stone, diabetes and fever.
57.	<i>Momordica charantia</i> . Linn. (Cucurbitaceae)	Karda	The juice of the fruits is given in diabetes till it is cured.
58.	<i>Mucuna pruriens</i> (L.) DC., (Fabaceae)	Kevach	Root paste applied externally on facial and paralytic places and root extract is given with water in empty stomach to sexually weak male.
59.	<i>Ocimum americanum</i> Linn. (Lamiaceae)	Tulsi	The leaves are crushed and mixed with salt, and eaten to increase the taste of tongue.
60.	<i>O. basilicum</i> Linn. (Lamiaceae)	Kali tulsi	The leaf decoction mixed with saline water is used to keep away the snakes.
61.	<i>O. gratissimum</i> L., (Lamiaceae)	Mamari	The extract of seeds is mixed with sugary water and given during hot summer days as nerve tonic.
62.	<i>Oldenlandia corymloosa</i> (L. F.) DC. Syn. <i>O. crystalline</i> Roxb. (Rubiaceae)	Ratwa	The root paste is applied and eaten to cure eczema and stomachache.
63.	<i>Phoenix sylvestris</i> Roxb. (Arecaceae)	Khajoor	The heartwood is given to ladies for increasing lactation after child birth.

64.	<i>Phyllanthus virgatus</i> Forst. (Euphorbiaceae)	Bhui aonla	Extract of the whole plant given in malaria.
65.	<i>Physalis minima</i> Linn. (Solanaceae)	Jangali Rasbhai	Two and a half leaves are eaten to cure fever and fruits are eaten to maintain body heat.
66.	<i>Senna tora</i> (L.) Roxb. (Caesalpiniaceae)	Puwadia	The seeds are crushed with water and applied in eczema and hemicrania.
67.	<i>Solanum nigrum</i> L. (Solanaceae)	Makoi	Leaf juice given in enlargement of spleen, Jaundice and Snake bite.
68.	<i>Solanum incanum</i> Linn. (Solanaceae)	Khatti ringdi	The seed powder is applied inside the mouth to cure toothache.
69.	<i>Solanum virginianum</i> L. (Solanaceae)	Kateli	The seed powder is applied inside the Asthma, Cough and Rheumatism.
70.	<i>Sterculia villosa</i> Roxb (Sterculiaceae)	Kudawala	The root paste is given only and also applied on the inflamed parts of the body to reduce Swellings and Bark used in asthma.
71.	<i>Malinkara hexandra</i> Roxb. (Sapotaceae)	Khirni	The stem bark boiled with water is used for bathing upto four days once in a day to bodyache.
72.	<i>Tectona grandis</i> L., (Verbenaceae)	Sagon	Stem bark is chewed in the case of any mouth disease.
73.	<i>Trichosanthes cucumerina</i> Linn. (Cucurbitaceae)	Tambakasri	The fruits are kept in water for 12 hours and used to give bath to patients suffering from jaundice.
74.	<i>Tridax procumbens</i> Linn. (Asteraceae)	Phulani	The paste of whole plant is used to stop bleeding caused by any outer stroke.
75.	<i>Ventilago denticulate</i> Willd. (Rhamnaceae)	Ghurbel	The stem bark paste mixed with sugar is given two times in a day for cooling effect.
76.	<i>Vitex negundo</i> L., (Verbenaceae)	Nirgundi	Leaf juice is mixed with the seeds of Ajwain (<i>Trachyspermum ammi</i> (L.) Sprague) and is given (a teaspoon) in stomach disorders.
77.	<i>Xanthum strumarium</i> Linn. (Asteraceae)	Gokhru	The seed paste is applied in forehead to cure headache and decoction of whole plant is given for three days to treat liver disorder.
78.	<i>X. uliginosa</i> (Retz.) Mahesh (Rubiaceae)	Gagri	The root paste is given in dysentery.
79.	<i>Zingiber roseum</i> Rosc. (Zingiberaceae)	Jangliadrak	The rhizome paste is applied on the body and the juice of the rhizome is given three times in a day to cure general fever.
80.	<i>Ziziphus mauritiana</i> Lamk., (Zingiberaceae)	Ber	Leaf paste or bark is applied over the place of scorpion sting.

4. Results and Discussion

Present study reports 80 plants species which are included fewer than 70 genera and 45 families which are used for the treatment 34 types of diseases. Generally local medicine man or knowledgeable of medicinal plants of Gond and Kol tribes is known as "Ojha". They keep secrecy about medicinal plants and uprooted according to required proportion. Usually they collect these plants after rainy season or Dashera festival. Most of the traditional medicines were prepared by healers from fresh material harvested from wild. Dried materials often given as powder form. Prescribed to take as a Juices, decoction or infusion of whole plants or plant parts given to patient and most commonly. The data on the medicinally important plants reveals that 34 were used again skin disease 2, diarrhea and dysentery 2, plants for respiratory, cough & cold or branchities or asthma 3, stomach pain 7, fever & typhoid 13, snake & scorpion bite 7, eye-disease 4, body pain 8, diabetes 6, jaundice 5, bone fracture 1 plants for cardiovascular.



5. Acknowledgement

The author is thankful to authorities of Pt. S.N.S. Govt. P.G. College, Shahdol (M.P.) for granting permission to carry out this work.

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