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THE USE OF MEDICINAL PLANTS AND TRIBES

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ABSTRACT

India is a country where nature is the life line of tribals. The present study was carried out in bichhiya block around the Kanha national park area of Mandla, where many tribes are living and using many local medicinal plants to heal themselves. Here the study is based on the use of folk medicinal knowledge of Baiga, Gond, Bhariya and Kol tribes located in the Mandla district of Madhya Pradesh. There are about 30 well known medicinal plants which becomes the part of many tribal medicinal preparations in form of dry and wet form. Different parts of plants like leaf, stem, root bark and fruit use in various treatments either alone or in combination. This study also explored that the basic or specific constituents of plant are responsible for their use in treatment of human and animal ailments. The knowledge of folk healers is very valuable in field of medicine and treatment.

KEYWORDS: Baiga, Gond, Bhariya and Kol.

INTRODUCTION

From the ancient time the human being is dependent on nature for food, shelter and health. Worldwide many medicinal systems like Indian Ayurveda, Unani and Chinese all are using various parts of the plants in different forms to heal the ailments and health problems. Ayurvedic practice is around 3000 years old, with a long history of managing disease. The 3 basic principles, called doshas (vata, pitta, and kapha). Oral administration routes play a major role in influencing individuals' doshas, via the ingestion of food, spices, and medicinal plants.[1] The study is mainly showing the use of locally present medicinal plants by Baiga, Gond, Bhariya and Kol tribes located in the Mandla district of Madhya Pradesh specially around the bichhiya and nearby placed forests. The folk healers become the people who use plant preparations for the different diseases in different forms like in powder, mixture or in fresh form according to the level of the problem.

These folk healers have inherited the art of curing the patient for skin, fungal, bacterial and many internal diseases by using medicinal plant preparations found in forest ecosystem around their tribal localities.[2] These healers know the properties of large number preparations used to cure body disorders and diseases, which needs to be documented and scientifically examined for cure of ailment. These plants were cross-checked with available literature to know the significance of this tribe on medicinal knowledge. A total of thirty commonly species belonging to different plants families were documented.[3] The use of herbs is increasing day by day not only in medicines but also in cosmetics and as food supplements and health tonics.[4]

Mandla district is the biodiversity rich state of Madhya Pradesh. In Mandla bichhiya block is surrounded by Ghughri Tehsil towards North, Mawai Tehsil towards East, Mandla Tehsil towards west, Mohgaon Tehsil towards North.[5] Most of the village population was below poverty line and away from the modern life. Utilization and harvesting practices of medicinal plants used by local people of bichhiya block.

During the survey it was observed that some areas are rich in biodiversity.[4] The preparation of remedies includes trees, shrubs, climbers and herbs. The documented information revealed that 30 medicinal formulations used by tribes of Mandla district for different diseases treatment in form of leaves, bark, fruit, root, seeds, flower or some time whole plant.6,7.

MATERIAL AND METHODS

2.1. Study Area

The present study was conducted in the Bichhiya block of Mandla districts which is covered with many forest parts and has Gond, Baigas and bheel and other tribes which use many Medicinal plants for their health and wellness. Karanjia Mal, Ghonta, Mocha,

Thoda, Bhai bahan nala, Devridadar, Kanhari Kala, Sakwah, Jagmandal, kala pahad. Mangeli, Motinala, Ajgar- dadar, Khairaki, ramnagar, have been identified in Bichiya block.

The study resulted in the documentation of 31 medicinal plants used by traditional healers for curing various diseases either directly single or in mixture with other herbs.

2.2. Survey

For the study the villages and forests of bichhiya was selected. The local folk medicine practitioners, vaidya, old peoples, pands, nari vaidys and forest officials were also interviewed for the collection practices of medicinal plants.

The extensive survey questioner included the used of different plants part in different therapies, traditional practices, quantity of medicinal plants collection, and medicinal plants trading. The plants are arranged alphabetically by botanical name, family, local name and use of plant. For the phytochemical of these plants literature survey was done with the help of internet and books.

Table – 1.

	Name of the Plant (Botanical name)	**Local name**	**Plant family**	**Plant part use**	**Disease treatment**	
1.	Abrus precatorius	Ghumachi		seed	Purgative and abortifacient, antifertility activity.	Abrin, alanine, serine, choline, valine, and methyl ester.[8]
2.	Acacia nilotica (L.) Del.	Babul	Mimosaceae	Bark	Pyorrhea, dysentery and diabetes, The gum is roasted and safely given in weakness and anemia. (iii) Leaf poultice is used for veterinary facture. Stem bark is useful in colic of cattles.	Terpenoids, tannins, alkaloids, saponins, and glycosides Terpenoid tannins, alkaloids, saponins, glycosides, anthraquinones, phenols[9]
3.	Acorus calamus Linn	Bach/Vach/ sweet flag	Araceae	Rhizome, leaf	The dried powdered rhizome with honey is effective to cure common cold and whooping cough. It removes catarrhal matter and phlegm from the bronchial tube and thus is highly beneficial in the treatment of bronchitis and asthma. (ii) Leaf paste is applied on wounds to destroy maggots. Rhizorne powder is useful in dyspepsia.	Alpha and beta-asarones[10]
4.	Achyranthes aspera Linn.	Chirchita, Latjra	Amaranthaceae	Root, seed	Root paste is applied on scorpion sting. (ii) Roasted and powdered seeds are useful in asthma. (iii) Root paste with heeng is given to cows and oxen for bronchitis. Antimicrobial, Larvicidal	Alkaloids, tannins, cardiac glycosides, steroids, flavonoids, terpenoids, reducing sugar saponin[11]
5.	Aegle marmelos (L) Corr	Bel	Rutaceae	Fruits, leaves, bark,	Diarrhea, dysentery, irritation of alimentary canal, fever and as tonic and cooling agent.	Coumarin, xanthotoxol, imperatorin, aegeline, marmeline, β-sitosterol[12]
6.	Albizdia lebbeck (L.) Willd	Siris	Mimosaceae	Bark and seeds.	Bark and seeds given in piles diarrhea and abdominal tumors. cough, flu, and lung ailments.	Fixed oil, stearic, arachidic,oleic and linoleic acid, tannin and saponins[13]

7.	*Aloe vera*	Gwarpatha	Asphodelaceae	leaf	The peelings of the leaves are used in skin burn. The gel of the plant is given orally in ulcers. the fleshy part is also used in facial creams.	Anthraquinone glycosides, aloin, Barbaloin, β-barboloin[14]
8.	Andrographis paniculata (Burm.f.) Nees	Kalmegh	Acanthaceae	Decoction of whole plant	The tribal and rural people widely use decoction of whole plant for malaria and jaundice with remarkable success	Andrographolide and neoandrographoli-de, flavonoids[15]
9.	Annona squamosa Linn	Sitaphal	Annonaceae	Root, leaf, seed, fruit	Roots and leaves are used to kill the worms in sores as a valuable bio-insecticide. (ii) Leaf extract is useful in veterinary wounds. Seed powder destroys the cattle maggots and ectoparasites.fruit as tonic	Acetogenins (ACGs), diterpenes (DITs), alkaloids (ALKs) and cyclopeptides (CPs)[16]
10.	Anogeissus latifolia (Roxb. ex. DC.)	Dhawa/ Dhaora/ Bakli	Combretaceae	Root, bark, leaf, fruit	The roots are useful in Kapha, vata, and abdominal disorders. (ii) The bark is useful in wounds and ulcers. (iii) The leaf juice is good for otopyorrhea. (iv) The fruits are useful in diarrhoea and dysentery.	Tannin, leucocyanidin, ellagic acid, Steroid, β-sistosterol a triterpenoid[17]
11.	Argemone mexicana Linn.	Pilikateli	Papavaraceae	Latex, seed	Latex is useful in scabies and ringworm. Seeds poultice is applied on boils.	isoquinoline alkaloids berberine, cryptopine, coptisine, muramine,[18]
12.	Asparagus racemosus Willd.	Satawar	Liliaceae	roots	The powder of massive roots alongwith milk is given during pregnancy to increase the body weight and growth of foetus. It is also good to restore the weakness and anaemia in nourshing women. (ii) Root powder with boiled water stops white discharge and bleeding during pregnancy.[6]	saponins and flavonoids[19]
13.	Azadirachta indica	Neem	Meliaceae	All parts	antiseptic and used in ulcer, eczema and skin diseases.	Azadirachtin, Nimbanene, Quercetin and ß-sitosterol, polyphenolic flavonoids,[20]
14.	Barleria prionitis Linn. sp.	Bajradanti, katsariya	Acanthaceae	Leaf	Leaf juice used in cough, ear complains, glands swelling, and gum troubles.	Barlerinoside, pipataline, verbascoside[21]
15.	Boerha aviadiffusa Linn.	Punarnaba, Patharchatta	Nyctaginaceae	Roots	The root is useful in anaemia, nervous weakness, constipation and stomach disorders. Root has antiviral properties and prescribed in jaundice.	amino acids, flavonoid glycosides, isoflavonoids (rotenoids), steroids (ecdysteroid), alkaloids, and phenolic and lignan glycosides.[22]
16.	Bauhinia variegata Linn.	Kachnar	Caesalpiniaceae	Bark, Flowers, Root,	Bark decoction is used to wash the oral ulcer. It is also useful in dysentery	Quercitroside. Isoquercitroside, rutoside, Flavanone[23]

17.	Buchanania lanzan Sprengel Syn. B. latifolia Roxb.	Char, Chironji	Anacordiaceae	Stem, Seed, root	The gum that exudes from the stem is considered efficaceous in diarrhoea. (ii) The seeds are very nutritive and given in general weakness. roots as a wound healing, anti-diarrhoeal, wound healing, anti-diarrhoeal,	kaemferol and glycoside flavonoid[24]
18.	Calotropis procera Br.	Madar	Asclepiadaceae	Root, bark leaves	Flowers are used in cold cough and Asthma Powdered Root bark used in dysentery. Fresh leaves in ulcer and as wormicidal	cardenolides, steroids, tannins, glycosides, phenols, terpenoids, sugars, flavonoids, alkaloids and saponins.[25]
19.	Cassia tora L.	Chakwda	Caesalpiniaceae	Leaf and seeds	Leaf and seeds used in skin disease for ring worm and itch.	Emodin, tricontain-1-ol, stigmasterol, β-sitosterolβ-D-glucoside, succinic acid, tartaric acid, uridine, quercetin, isoquercitin, anthraquinones[26]
20.	Centella asiatica (L). Urba	Bramhi	Apiaceae	Entire plant	nervine tonic, and skin diseases as weak sedative, cardio depressant, hypotensive and in leprosy.	pentacyclic triterpene compounds, mainly asiatic acid,madecassic acid and triterpene saponin-asiaticoside, madecassoside several micronutrients[27]
21.	Cuscuta reflexa Roxb.	Amarbel	Convolvulaceae	Seeds	Seeds used in ulcer and liver disorders.	cuscutin, amarbelin, β-sitosterol, stigmasterol, kaempferol, dulcitol, myricetin, quercetin, coumarin oleanolic acid[28]
22.	Dalbergia sissoo Roxb	Shisham	Fabaceae	leaf, Flowers Skin	Decoction of leaf Useful in gonorrhoea, Flowers were used for Skin problems, as blood purifier and immunity Booster	carbohydrates, proteins, amino acids, phenolic compounds, flavonoids, alkaloids, saponin, phytosterols, steroids and tannins[29]
23.	Eclipta prostrata Linn.	Bhringraj, Bhumiraj	Asteraceae	Leaves	Leaves are chewed for control of malarial fever	coumestan derivatives, phenolic acid derivatives, flavonoids, triterpenoid and steroid saponins, substituted thiophenes[30]
24.	Hygrophila aurticulata (Schum)	Talmakhana	Acantahceae	Leaves, Seeds Roots	Leaves, seeds and roots are used as diuretics and also for jaundice, dropsy, rheumatism and urinogenital disorder	lavonoids (apigenin, luteolin, ellagic acid, gallic acid and quercetin), alkaloids (asteracanthine, asteracanthicine), triterpenes (lupeol, lupenone, hentricontane and betulin), sterols (beta-stigmasterol)[31]
25.	Madhuca longifolia (Koen) Mac Br.	Mahua	Sapotaceae	Bark, flower	bark is used in incurring bleeding gums and ulcers. Flowers are used in cough and bronchitis	proteins, amino acids, mucilage, terpenoids, anthraquinone glycosides, cardiac glycosides, saponins and tannins[32]
26.	Mucuna pruriens (L) DC	Kemmach	Fabaceae	Root, Seeds	Root used in paralysis, seeds are used as nervine	saponin flavonoids, moderate

					tonic neuroprotective effects, menses troubles and as vermifuge, strong infusion of roots mixed with honey is given in cholera	amount of tannin, Phenols[33]
27.	Papaver somniferum	Afeem	Papaveraceae	Flower, fruits, Seeds	Flower, fruits and Seeds have pain releasing and sleeping effects and useful in irritating cough, pneumonia, ulcers, gastritis and influenza	alkaloids like morphine, codeine, porphyroxine[34]
28.	Rauvolfia serpentine (L.) Benth.	Sarapgandha	Apocynaceae	Leaf, Root	Leaf juice is used as remedy for opacity of cornea, Root is sedative, reduces hypertension.	alkaloids, resperine carbohydrates, flavonoids, glycosides, phlobatannins, phenols, resins, saponins sterols, tannins and terpenes[35]
29.	Shorea robusta Gaertn f.	Sal	Dipterocarpaceae	Resin	Resin is used in skin diseases, diarrhea and dysentery	34alkaloids, flavonoids, glycosides, phenolics, saponins, steroids, tannins, Triterpenoids[36]
30.	Terminalia arjuna (Roxb.) Wt. & Am.	Arjun	Combretaceae	Bark, fruit	Bark infusion used in heart troubles and leaf juice in earache, hypertension and as diuretic and has tonic effect in cirrhosis of lever.	Arjunolic acid, tomentosic acid, β-sitosterol, Arjunone, cerasidin[37]

RESULTS AND DISCUSSION

During the study total common 30 medicinal plants were investigated for the consumption or application on body as a medicine in various forms according to the health problem by the traditional healers. Their chemical constituents were also searched with help of literature available in various research papers of various researchers and medical practitioners. The various parts of plants like root, stem, leaves, or any part which carry medicinal properties was used by local traditional healers (Table 1).

According to the study it was found that the plant parts are used in different forms like powder, paste, oil, raw, dried, wet, roasted or in decoction. The preparation can carry the single drug or mixture of different plant parts according to the disease, its effect on body organ and duration of the problem. The dose of the preparation becomes according to the age of the person along with the proper instruction of taking dose and food precautions. Different drugs given in different During the study it was found that mostly the medicinal plants carry lots of common phytoconstituents and some specific constituents which affect body actively and rejuvenate the body activity either chemically or physiologically. So that the folk medicinal practitioner and tribal healers have used the plant preparation in treatment. Their knowledge is based on the practice of their old family members who transferred their knowledge and various methods of drug preparation with help of natural availabilities from generation to generation and while modern time scientists have also verified these drug formations in their medicines due to their effectiveness.

Some traditional preparation needs more scientific explorations and experiments to show

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