



Ethno-medicinal plants used to treat gynecological disorders by tribal people of Madhya Pradesh, India

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Abstract

Medicinal plant resources of forest origin are extensively used in India for various systems of medicine like Ayurveda, Unani, Homoeopathy, Allopathy, Siddha and Ethnic etc. Such traditional used of plants as medicine has not been documented properly, rather remain secret and passed from one generation to another through word mouth. Naturally, due to non-recording properly, this traditional knowledge is gradually vanishing as a result of modernization. The present paper enumerates the use of several medicinal plants from in the treatment of gynecological disorders by the tribal of Madhya Pradesh.

Keywords: Medicinal plant, traditional knowledge, tribal, gynecological disorders

Introduction

India is one of the world's 12 mega diversity, centres having rich vegetation with 47,000 plant species and a wide variety of medicinal plants along with tradition of plant based knowledge distributed among the vast numbers of ethnic groups. There are many medicinally important species which are used to produce various types of drug and medicines to treat many ailments in India since the time of the *Rig veda* (approximately 2000 BC). India represents one of the great emporia of ethno-medicinal to wealth and has enormously diversified living ethnic groups and rich biological resources. An appropriate dosage to prepare drug from different parts of plant body like root, stem, leaves, flowers, fruits, barks, seed, rhizomes, bulbs, tubers are prescribed as a remedy to treat different kinds of diseases and disorders.¹⁻³

Tribal have their own traditional knowledge based system of curing many gynaecological diseases. Modern medicinal facilities are scanty and could not reach inaccessible pockets where those tribal peoples lived inspite of the government's best effort. Moreover, herbal medicines are cheap, easily available and patient friendly. So the tribals prefer their indigenous traditional knowledge for cure of different ailments rather than use modern medicine, although their knowledge dosages are not always scientific.⁴⁻⁵

Although the tribal people traditionally use many ethno-medicinal plants to cure many gynaecological disorders, yet no such documentation has been done earlier.

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Keeping this in view, the present study was initiated with an aim to identify medicinal plants resources and traditional knowledge of tribal people of Madhya Pradesh to treat several gynaecological troubles.⁶ A synoptic account of plant species, parts used, application and approximate doses in possible cases and ethno-medicinal values to cure gynaecological disorders among the tribals has been prepared in the present study.

Material and Methods

During the field survey in Madhya Pradesh State from 2008 and 2010 as many species could be identified which are used to cure sexual and gynaecological disorders among tribal people. The medicinal uses noted against each species are based on author's experience during field survey and information gathered by literature. Local elders and experienced tribal peoples (both men and women) were interviewed and cross-interviewed again and again. Local 'Vaidyas' and 'Ojhas' who primarily deal with the prescription of ethno-medicine were thoroughly interviewed and cross-interviewed regarding doses and administration. The plant specimens were collected and identified with local flora and are preserved in Department of Botany, Janata PG College, APS, University, Rewa, M.P.⁷⁻¹⁰

Results and Discussion

The study reveals that knowledge of use of different ethno-medicinal plants, their parts, doses, application was acquired by local healers by trials and error method. Such knowledge is transferred from one generation to another by word of mouth only. Such knowledge is restricted to few families of the area recognized as 'Vaidyas' and 'Ojhas'. They generally treat all kinds of diseases including gynaecological disorders in locality and transfer their knowledge to their next generation.

They generally diagnose diseases based on symptoms told by the patients as well as based on their personal experience in treating human ailments. The methods of preparation fall into four categories like plant parts applied as paste, juice extracted from various plants parts, decoction of plant parts mixed with water and other liquids and powder made from different plant parts. It was found that some combination by using more than one plant part were also prepared by applying more than one method of preparation. Some species cure single disorders but majority cures related to different diseases. In some plants only one part is utilized for treatment but in maximum cases multiple parts are being used. Medicines are taken orally directly or mixed with water, milk, honey, black pepper etc. It was observed during study that most of the medicines are administered in empty stomach early in the morning and period of treatment varies from 7 to 21 days in most of the cases. Doses were measured generally in teaspoonful or in milliliter which varies from patient to patient depending on their age, physical health conditions and other factors. They generally do not cultivate the medicinal plants but solely depend on forest based resources.

Besides gynecological disorders, these plants species are traditionally used to treat other venereal diseases like abnormal discharges of semen, seminal weakness, gonorrhoea, syphilis, impotency, complications before and after birth, etc.

It has been found that single plant part was used in many cases but in many condition polyherbal preparation were also been used by the tribes. Hence, the present study emphasizes a detailed account of the studied medicinal plants of the study area, which in future may be accesses for various active phytochemical and pharmacological screening to formulate potent drugs.

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Table 1: Ethno-medicinal plants used to treat gynaecological disorders

Botanical Name	Family	Local name	Parts used	Method of preparation
<i>Abrus precatorius</i> L. (C)	Fabaceae	Ratti	Seed	White seeds kept in unboiled cow milk overnight and then given to women in the morning for 15 days at the end of menstruation cycle to prevent contraception.
<i>Acacia farnesiana</i> Willd. (T)	Mimosaceae	Guyebabla	Bark	Barked soaked in water and applied 7-10 days continuously to cure leucorrhoea and menorrhagia.
<i>Achyranthes aspera</i> L. (H)	Amaranthaceae	Chirchira	Root, leaf	2-3 ml of decoction of fresh leaves is given twice a day orally as cure to stop excessive haemorrhage during early pregnancy and post partal haemorrhage. 2-3 ml fresh root extract given orally twice a day as cure for post abortion abdominal pain. 3 ml fresh leaf decoction given orally for 7-15 days once or twice a day to cure amenorrhoea and dysmenorrhoea. Inflorescence paste used externally to induce abortion.
<i>Aloe barbadensis</i> Mill. (H)	Liliaceae	Ghritakumari	Fleshy leaf	10 ml leaf juice mixed in water given to women in empty stomach for 10 days to treat uterine disorders, suppression of menses, facilitate abortion and act as a tonic after pregnancy.
<i>Amaranthus spinouss</i> Linn. (H)	Amaranthaceae	Chaulai	Whole plant, root	Whole plants used in cure leucorrhoea, Root paste (5 ml) along with honey and water applied for 21 days to cure leucorrhoea, menorrhagia, gonorrhoea etc.
<i>Annona squamosa</i> L. (T)	Annonaceae	Sitafal	Dried root powder	In the morning 5 gm dried root powder in water is given to woman for 7 days in empty stomach for abortion up to 3-4 months pregnancy.
<i>Annona reticulate</i> L. (H)	Annonaceae	Ramphal	Seed powder	A mixture of seed powder (3 gm) with Black pepper (<i>Piper nigrum</i> -3gm) in cow milk for 15 days continuously is used for spoiling pregnancy up to 3-4 months.
<i>Argemone mexicana</i> L. (H)	Papavaraceae	Ghamoya	Leaf	Leaf juice (2 spoonfuls) is given to woman twice a day for 15 days to promote pregnancy.
<i>Aristolochia India</i> Linn. (H)	Aristolochiaceae	Iswarmul	Root	Root powder (2 gm) mixed with water applied in empty stomach for 21 days to cure menstrual

				disorders and facilitate abortion.
<i>Asparagus racemosus</i> Willd. (H)	Asparagaceae	Satamuli	Root	Root paste mixed root paste of Ankar (<i>Alangium salvifolium</i>), Palash (<i>Butea monosperma</i>), Amlaki (<i>Emblica officinalis</i>), Ramdantan (<i>Smilax avalifolia</i>) and make a common paste which is given for continuous 21 days early in the morning to cure leucorrhoea, other uterine disorders and abnormal discharges of semen.
<i>Azadirachta indica</i> A.Juss (T)	Meliaceae	Neem	Stem bark, fruit	Decoction of stem bark (2 spoonfuls) mixed with honey is given women continuously for 15 days after menstruation cycle as a contraceptive. Fruit dust or paste (1 teaspoonful) mixed with water applied to control menstrual cycle.
<i>Bauhinia vahlii</i> (Wt. & Arn.) Benth. (T)	Caesalpiniaceae	Chihur lata	Seed	Seed tonic is used as aphrodisiac and believed to cure uterine complications.
<i>Bombax ceiba</i> L. (T)	Bombacaceae	Simul	Fleshy root	Root paste of young plants (1 gm) mixed with raw cow milk (10 gm) is given once a day in early morning for 7 days to regulate irregular menstruation.
<i>Barassus flabellifer</i> L. (T)	Arecaceae	Tal	Male inflorescence, root	Ash of male inflorescence with powder of black pepper (<i>Piper longum</i>) and cow milk in the ratio 2:1:1 is prescribed to woman as contraceptive. Root paste mixed with cow milk administered to women for continuous 7 days to cure excessive or prolonged menstrual cycle.
<i>Boerhaavia diffusa</i> (L.f.) Willms. (H)	Nyctaginaceae	Punarnaba	Whole plant	Decoction (15 ml) of plants is given once a day in the early morning continuously for 15 days to treat leucorrhoea. Root paste (2 spoonfuls) mixed with water given to women continuously for 7 days early in the morning to hasten the delivery.
<i>Butea monosperma</i> (Lam.) Kuntze. (T)	Fabaceae	Palash	Bark, flower, gum	Tablets mixed with adequate water given early in the morning for 15 days to cure vaginal diseases, leucorrhoea, amenorrhoea, dysmenorrhoea, menstrual disorders and also cause temporary sterility. It is also used as an aphrodisiac.
<i>Calotropis gigantea</i> R.Br. (S)	Asclepiadaceae	Akanda	Root, latex	Root decoction (3 ml) with Piper longum paste (1 gm) is given to women in empty stomach for continuous 10 days once a day for treatment of leucorrhoea and irregular menstruation cycle.

				Latex applied locally to induce uterine contraction during child birth.
<i>Cassia fistula</i> Linn. (T)	Caesalpineaceae	Sonalu	Stem bark	Paste of stem bark or powder (2 tea spoonful) mixed with black pepper is given to women for 7 days to treat menstrual disorders.
<i>Catharanthus roseus</i> (L.) G. Don (H)	Apocynaceae	Sadabahar	Leaf	Leaf juice (5 ml) mixed with honey is given in the early morning for continuous 7 days once a day to treat leucorrhoea and menorrhagia.
<i>Ceiba pentandra</i> Linn. (T)	Bombacaceae	Swet simul	Stem, root, gum	Root paste mixed with sugar given twice daily as cure to prevent excessive loss of semen and gonorrhoea. Tree gum is used to cure menorrhagia 5 gm stem powder mixed with warm milk is given twice a day to cure menorrhagia.
<i>Centella asiatica</i> (Linn.) Urban (H)	Apiaceae	Thankuni	Leaf	Leaf juice (2 spoonful) mixed water is given for 7 days is empty stomach to treat irregular menstruation and syphilitic ulcers.
<i>Cissus quadrangularis</i> Linn. (C)	Vitaceae	Harjora	Stem	Stem juice used to cure irregular menstruation.
<i>Clerodendron viscosum</i> Vent. (S)	Verbenaceae	Ghentu	Leaf, root	Two spoonful paste along with water are administered for continuous 10-15 days to cure white discharges women.
<i>Chitoria ternatea</i> Linn. (C)	Fabaceae	Aparajita	Root	One tea spoonful root paste with black pepper (<i>Piper longum</i>) mixed in water taken in the morning as cure to treat leucorrhoea.
<i>Dalbergia sissoo</i> Roxb. (T)	Fabaceae	Sissoo	Stem bark, heart wood, leaf	Paste (1 spoonful) mixed with honey taken twice a day for 15 days to treat amenorrhoea, menorrhagia and dysmenorrhoea. Leaf decoction is beneficial in gonorrhoea.
<i>Dillenia pentagyna</i> Roxb. (T)	Dilleniaceae		Stem bark	Tree gum is used for easy delivery and reduces uterine complications.
<i>Dioscorea bulbifera</i> Linn. (C)	Dioscoreaceae	Ratalu	Tuber	Root paste used to treat birth control. 2 spoonful root paste mixed with cow milk and administered to both men and women early in the morning for continuous 15 days to increase sexual desires.
<i>Emblica officinalis</i> Gaertn.	Euphorbiaceae	Amlaki	Fruit, seed	Fruit and seed dust (5 gm) mixed with honey administered for 7-10 days in empty stomach early in the morning to cure menorrhagia and

(T)				gonorrhoea.
<i>Eragrostis cynosuroidis</i> P.Beauv. (H)	Poaceae	Kusha	Root	2 spoonful roots paste mixed with warm milk is given for 15 days once daily in the early morning to cure menorrhagia.
<i>Feronia elephantum</i> Corr. (T)	Rutaceae	Kathbel	Leaf	5 ml leaf juice mixed with honey is given once a day for 15-20 days used to cure leucorrhoea and menorrhagia.
<i>Ficus bengalensis</i> L. (T)	Moraceae	Bat	Root, bark	1 tea spoonful paste mixed with honey is given once a day for 15 days to cure leucorrhoea and menorrhagia.
<i>Ficus hispida</i> L.f. (T)	Moraceae	Du mur	Fruit	Boiled green fruits are given to mother in the morning for continuous 21 days to stop abdominal pain before child birth.
<i>Ficus religiosa</i> L. (T)	Moraceae	Aswatha	Bark, Leaf, seed	Paste of all (1 tea spoonful) mixed with water used to facilitate abortion up to 3-4 months of pregnancy. It also induces sterility in women.
<i>Hibiscus rosa sinensis</i> L. (S)	Malvaceae	Gudhal	Stem bark, flower	Paste of stem bark (15 ml) is given to women continuously for 7 days for abortion. Paste of flower bud (3 gm) with country liquor (2 ml) is given to women at 3 days of menstruation as a contraceptive. Paste of flowers (3 gm) along with cow milk cures menorrhagia, amenorrhoea, menstrual diseases and uterine discharges when given 15 days continuously early in the morning. It is also used as aphrodisiac.
<i>Heliotropium indicum</i> L. (H)	Boraginaceae	Hatisur	Root, flower	Root decoction (10 ml) with 2 ml honey is used as vitamin for iron deficiency during pregnancy period. Flower decoction act as an abortifacient.
<i>Hemidesmus indicus</i> R.Br. (H)	Asclepiadaceae	Anantmul	Root	Root dust (5 gm) mixed with water used to cure leucorrhoea and syphilitic ulceration when applied 15 days continuously.
<i>Hygrophila schulii</i> (Ham.) Almeida (H)	Acanthaceae	Kulekhara	Whole plant, seed, root, leaf	Seed paste or dust mixed sugar and milk used to treat leucorrhoea, gonorrhoea and spermatorrhoea. Extract of whole plant applied to increase sexual desire of both men and women.
<i>Ipomoea paniculata</i> (L) R. Br. (C)	Convolvulacea e	Bhuikumra	Root	Root paste or powder is believed to cure menorrhagia, gonorrhoea, spermatorrhea and syphilis. It also acts as an aphrodisiac.
<i>Leucus aspera</i>	Lamiaceae	Dron puspa	Leaf	1 tea spoonful leaf juice mixed with honey is applied for 15-20 days in empty stomach used

Link. (H)				to treat amenorrhoea and dysmenorrhoea.
<i>Mangifera indica</i> L. (T)	Anacardiaceae	Aam	Flower, unripe fruit, bark	Decoction of stem bark along with black Pepper is given to women continuously for 21 days in empty stomach to stop bleeding from uterus. Seed powder is also beneficial in leucorrhoea and menorrhagia.
<i>Michelia champaca</i> Linn. (T)	Magnoliaceae	Champa	Stem bark, flower, fruit	Dried stem bark (2 gm) mixed with water is administered twice a day for 15 days to cure irregular menstruation cycle. Flower and fruits is believed to cure gonorrhoea.
<i>Mimosa pudica</i> L. (H)	Mimosaceae	Lagyabati	Root	Root paste (1 tea spoonful) mixed with honey administered for 7 days early in the morning to cure vaginal and uterine complaints.
<i>Moringa oleifera</i> Lam. (T)	Moringaceae	Munga	Root, bark, gum	Root and bark (1 tea spoonful) mixed with warm milk is given for 15 days to induce abortion of women, menstrual disorders and several venereal diseases.
<i>Mucuna pruriens</i> (Linn.) DC (C)	Fabaceae	Kemanch	Seed	A pill prepared from powdered seeds boiled with cow milk mixed with Kamraj (<i>Buettneria herbacea</i>) rot dust, sugar and honey is given to cure leucorrhoea and menorrhagia. Said pill is very effective both for men and women in case of impotency.
<i>Nelumbo nucifera</i> Gaertn.	Nymphyaeaceae	Padma	Rhizome, Flower	decoction of rhizome (15ml) is given to women on empty stomach for 15 days to cure white discharge and other menstrual problems. Flower paste mixed with milk administered for 7 days to promote pregnancy
<i>Nyctanthus arbortristis</i> L. (T)	Nyctanginaceae	Harshingar	Whole plant	2 spoonful paste mixed with honey is given 15 days to treat menorrhagia.
<i>Nymphaea nouchali</i> Burm.f. (Aquatic herb)	Nymphyaceae	Lal Shaluk	Rhizome	2 Spoonful paste mixed with honey is administered for 7 days twice daily to regulate menstruation when it is high or low.
<i>Phyllanthus niruri</i> Hoof.f. non Linn. (H)	Euphorbiaceae	Bhuiamala	Whole plant	1 tea spoonful paste mixed with water is given for 7-10 days to treat menorrhagia and gonorrhoea.
<i>Phyllanthus urinaria</i> Linn.(H)	Euphorbiaceae	Hajarmoni	Whole plant	Plant paste (1 tea spoonful) mixed with water is administered once in a day continuously for 7 - 10 days to cure genitor urinary complication and gonorrhoea.

<i>Piper longum</i> Linn. (c)	Piperaceae	Pipli	Fruit	Powdered pipli (2gm) with a glass of milk twice a day after food for 15 days continuously used as aphrodisiac. it is used to facilitate abortion up to 3-4 month of pregnancy when administered for longer period. It is also used to check uterine haemorrhage.
<i>Plumbago indica</i> Linn. (S)	Plumbaginaceae	Chitrak	Root	Root paste (1 tea spoonful) mixed with honey is given early in the morning in case of abortion. It is also used to treat syphilis.
<i>Plumbago zeylanica</i> Linn. (S)	Plumbaginaceae	Swet chita	Root	Root decoction (2 tea spoonful) with black pepper is given 20-25 days in empty stomach to treat several venereal diseases and help in abortion up to 3-4 months of pregnancy.
<i>Pterocarpus ocerifolium</i> Willd. (T)	Sterculiaceae	Kanak champa	Stem bark, leaf, flower	Decoction of stem bark and petiole mixed with water is given for 7-10 days continuously early in the morning to cure gonorrhoea. Flower tonic is useful in leucorrhoea.
<i>Punica granatum</i> Linn. (T)	Punicaceae	Dalim (Bedana)	Flower	Paste of flower (1 tea spoonful) mixed honey and warm milk used to cure leucorrhoea and menorrhagia.
<i>Pterospermum marsupium</i> Roxb. (T)	Fabaceae	Piasal	Bark	Paste of bark (1 tea spoonful) mixed with honey used to cure leucorrhoea and menorrhagia of women.
<i>Rauvofia serpentina</i> Benth. ex. Kurtz (H)	Apocynaceae	Sarpagandha	Root	Root decoction (1 tea spoonful) mixed with cow milk applied for 7-10 days continuously one a day to increase uterine contraction for expansion of foetus in difficult cases.
<i>Ricinus communis</i> L. (S)	Euphorbiaceae	Rehri	Leaf	Leaf juice (2 spoonfuls) mixed with honey applied in empty stomach for 15 days to promote menstruation in case of less menstruation.
<i>Saraca asoca</i> (Roxb.) Dewilld. (T)	Caesalpineaceae	Ashok	Bark	Dried bark paste or tablet mixed with water is given for continuous 21 days to cure bloody leucorrhoea, menstrual pain, regulation of menses, menorrhagia and complaints of menopause. Also used as uterine tonic.
<i>Semecarpus anacardium</i> Linn.f. (T)	Anacardiaceae	Bhelai	Seed, gum	Seed dust (2 gm) mixed with honey and cow milk applied to treat menorrhagia and other venereal diseases like syphilis etc. Bark from gum believed to cure venereal diseases.
<i>Sesbania grandiflora</i> Pers.	Fabaceae	Bakphul	Flower	Paste of flower (1 tea spoonful) mixed with water is administered once a day for 7-10 days

(T)				to treat scanty menstruation of women.
<i>Sida acuta</i> Burm. f. (S)	Malvaceae	Pila berela	Leaf, root, seed	10 ml leaf juice with 10 ml decoction is given to cure impotency. Seed dust(1 tea spoonful) mixed with water is given 7-10 days continuously to treat leucorrhoea and gonorrhoea.
<i>Sida cardifolia</i> L. (S)	Malvaceae	Berela	Leaf	Decoction prepared by soaking pulverized twigs with sugar is used to cure gonorrhoea. Root paste mixed with milk is given to women for continuous 15 days inempty stomach to treat leucorrhoea and frequent micturition.
<i>Sida rhombifolia</i> Linn. (S)	Malvaceae	Swetr berela	Root	Root paste (1 tea spoonful) mixed with milk is given once a day for 21 days to get relief from leucorrhoea.
<i>Smilax ovalifolia</i> Roxb. (C)	Smilacaceae	Ram dantan	Root	One tea spoon ful root paste mixed honey and warm milk is applied 20-25 days to treat abnormal discharges of semen and other uterine diseases.
<i>Solanum surattense</i> Burm. f. (H)	Solanaceae	Kantakari	Whole plant	Paste or dust (5 gm) mixed with water applied for 7 days to promote conception and to cure gonorrhoea.
<i>Spondias pinnata</i> Kurtz. (T)	Anacardiaceae	Amra	Wood, root	Wood is used in gonorrhoea and leucorrhoea. Root paste regulates menstrual cycle in case of low or high menstruation.
<i>Stephania japonica</i> (Thumb.) Miers. (C)	Menispermaceae	Chotopard	Leaf	10 ml leaf juice mixed with honey and cow milk is given once a day for continuous 21 days to treat leucorrhoea, also used in birth control.
<i>Strychns nuxvomica</i> L. sp. (T)	Loganiaceae	Kuchila	Seed	Seed powder (1 gm) mixed with water is given to women for continuous 7 days on empty stomach to treat menstrual disorders and to increase sexual desire both for men and women.
<i>Tamarindus indica</i> L. (T)	Caesalpineaceae	Imli	Fruit	Fruit paste (2 gm) mixed with 1 tea spoonful honey and one glass of milk applied to women to cure menorrhagia.
<i>Terminalia arjuna</i> (Roxb.) Wight. & Arn. (T)	Combretaceae	Arjuna	Stem bark	2 gm paste mixed with honey and water twice a day after food is given continuously 21 days to cure leucorrhoea, menorrhagia, spermatorrhoea, etc.
<i>Tephrosia purpurea</i> (L.)	Fabaceae	Bonnil	Leaf	5 ml leaf decoction mixed with 2 ml honey is prescribed to women twice a day continuously

Pers. (H)				for one month against post natal complications.
<i>Wedelia chinensis</i> Merr. (H)	Asteraceae	Bhringaraja	Whole plant	5 ml decoction mixed with water given to women for continuous 21 days in empty stomach to treat uterine haemorrhages, menorrhagia, etc.
<i>Withania somnifera</i> Dunal. (H)	Solanaceae	Aswagandha	Root	1-2 gm root dust with warm milk given twice or thrice a day until cure in case of leucorrhoea and menstrual troubles. ½ to 1 tea spoonful root paste twice or thrice given to men in empty stomach for long period to cure impotency.
<i>Woodfordia fruticosa</i> Kurz. (S)	Lythraceae	Dhadki	Dried flower	5 gm dried flower powder mixed with 5 ml honey is given to women once a day continuously for one month for treatment of leucorrhoea and menorrhagia. It is also considered as safe stimulant of pregnancy.
<i>Vernonia cinerea</i> L. (H)	Asteraceae	Shahadevi	Leaf, root	Chewed locally or boiled material is used to cure sexual impotency and erectile dysfunction. It is also cures leucorrhoea and control excessive menstrual cycle.
<i>Ziziphus mauritiana</i> Lam. (T)	Rhamnaceae	Kul	Stem bark	Paste of stem bark mixed with water is given twice a day after food for 15 days as a cure of abdominal pain during pregnancy.

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