

THE USE OF MEDICINAL PLANTS FOR THE TREATMENT OF GYNAECOLOGICAL DISORDERS IN THE EASTERN PARTS OF INDIA

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ABSTRACT

Background: In India the prevalence of gynaecological disorders are alarming in situation at present. Due to the social stigma, the women do not disclose their gynaecological disorders even to their closest neighbours. They disclose their problems to the local herbal healers or practitioners only. Herbal healers treat these diseases using the plants which have immense medicinal potentiality. An attempt has been made to collect the information from eastern parts of India about the use of phytomedicine for the treatment of female diseases. In the beginning of 21st century the phytomedicines achieved the reliability to rescue the patients from the fatal diseases.

Methods: The prescription of ethnomedicin were thoroughly interviewed and cross interviewed the local healers, patients, old and experienced tribal peoples regarding doses and administration.

Results: About 100 indigenous medicinal plants have been recorded. The name of the plants, the parts used and the method of application have been investigated in details.

Conclusion: The present study is significant to the ethno-botany and emphasizes a detailed account of the studied medicinal plants of the study areas, which in future may be accessed for various active phytochemicals and pharmacological screening to formulate potent drugs.

Key words: Gynaecological disorders; Phytomedicine; Traditional knowledge; Eastern India.

BACKGROUND

Medicinal plants are used to cure specific ailments by the people throughout the globe from the ancient times. It is a fact that the village people are generally rely on the medicine developed from the plants directly or indirectly. Again the tribal people who reside in a very remote rural areas are fully dependent upon the herbals. Local herbal practitioners or healers are practicing the use of medicinal plants for the common people in a very low expense. This plant based traditional medical system continue to provide the primary health care to more than three-quarters of the world's population. The WHO has estimated eighty per cent of the global population relying chiefly on traditional medicine [1]. With the advent of human civilization, many systems of therapy (Ayurveda, Siddha, Unani etc) have been developed primarily based on plants. The chemical compounds of allopathic medicines are costly and have side effects. The patients are seeking the

alternative system of medicines which are less expensive and will have no side effects. In the beginning of 21st century the phytomedicines achieved the reliability to rescue the patients from the fatal diseases. Herbal medicine have many advantages: have no side effects, better patient's tolerance and relatively less expensive. Plant derived phytomedicins have shown great promise in the treatment of intractable infectious diseases including opportunistic AIDS infections. Plant derived anti-infective agents have important contributions for the treatment of different types of cancer also. Use of plants for the treatment of various human ailments is as old as human civilization. In India about 95% of the Indian population is dependent on the traditional system of medicine [2]. Menstrual disorders are common in women in the Eastern India. This region is well developed by all means, women of this region have a good deal of faith on local plants used for these problems. Many women do not approach doctors because of

hesitation and lack of awareness. The traditional healers have a commendable knowledge of medicinal plants around them [3].

In Jammu and Kashmir the Gujjar, Bakerwal and Pahari tribes of district Rajouri used some plants for their gynaecological problems [4]. The use of Ethno-medicinal plants to treat gynaecological diseases in Madhya Pradesh of India by the tribal people has been extensively studied [5]. The traditional knowledge regarding the herbal folk remedies for gynaecological disorders of the tribals of Simalware region of Dungarpur in Rajasthan has been investigated recently [6, 7]. The Malayali tribes Ethno of Yercaud hills of Salem District in Tamil Nadu used the medicinal plants in their everyday life for gynaecological problems [8]. The rural population of Haryana also have used the folk medicine used in gynaecological and other related problems [9]. The information about the traditional knowledge of the phytomedicine for female disease have been collected from the tribals of Mayurbhanj Distric, Orissa in India [10] and more information has been gathered from West Bengal [11, 12]. Indigenous medicine used for treatment of Gynaecological disorders by the tribal of Chhattisgarh in India have also been reported [13]. Plants used for the treatment of spontaneous abortion and miscarriage has been extensively investigated [14] More than 80% people reside in villages and the number of tribal people is also a remarkable figure in West Bengal, Orissa, Bihar, Assam and Manipur. The climatic, soil and the other environmental factors are congenial for the spreading of gynaecological disorder. Sexually transmitted infections (STIs) are a major public health problem and are one of the most common causes of illness and even death in the world today [15]. They have far reaching health, social and economic consequences, particularly in the developing world. Like others so many common diseases the STIs like gonorrhoea and syphilis among women in the villages are very common in our country. Das et al (2013) recorded the use of medicinal plants for the treatment of Gonorrhoea and syphilis in south West Bengal of India [16].

The common menstrual problems prevailing in the study area are amenorrhoea, dysmenorrhoea, leucorrhoea, menorrhagia, menometrorrhagia, metrorrhagia, oligomenorrhoea. Some others gynaecological disorders like uterine haemorrhage, infertility, spontaneous abortion, postpartum haemorrhage have also been investigated.

Keeping this in view, the present study was initiated with an aim to identify medicinal plants resources and traditional knowledge of tribal people of Eastern India to treat the gynaecological troubles [17]. A synoptic account of plant species, family, parts used, ailments application and approximate doses in possible cases and ethno -medicinal values to cure gynaecological disorders among the tribals and for the common peoples has been prepared in this study.

METHODOLOGY

In order to document the utilization of indigenous medicinal plants, a sample survey was carried out during the last three years (2010-2013) in different villages and forest areas of Eastern parts of India. The Survey was carried out throughout the year so as to get maximum information. Repeated enquiries were made to understand their knowledge, methods of diagnosis and treatment of diseases. Data were collected on the specific parts of the plants used, collection, method of uses of the drugs, dosage administration and the purposes for which they were used. The information on medicinal uses of the indigenous plants have been described after gathering information from general local people, experienced aged rural folk, traditional herbal medicine practioners and local herbal drug sellers. Local elder and experienced tribal peoples were interviewed and cross - interviewed following the questionnaire [18-21]. Local "Vaidyas" and "Ojhas" who primarily deal with the prescription of ethno-medicine were thoroughly interviewed and cross - interviewed regarding doses and administration. The medicinal plants specimens were collected and identified with the help of authentic specimens, books, journals, floras and revisions [22-32] and documented in the herbarium of Dept.

of Botany, Raja N.L. Khan Women's College or Up-to-date author citation [33] was followed.

RESULTS AND DISCUSSION

The present paper deals with 100 plants species under 54 families of which 32 species belong to trees, 8 species belong to shrubs and 60 are herbs. From the tree species the bark, leaves and seeds are used: in case of herbs species the whole plant is used. The treatments do not cause any sides affects. The plants are used either solely or in combination with other plants. The mode of preparation and administration is very easy and suitable. The study reveals that knowledge of use of different ethno-medicinal plants, their parts, doses, application was acquired by local healers on trial and error method. Such knowledge is dissiminated from one generation to another by word of mouth only. Interestingly, this knowledge is confined to few families of the area recognized as 'Vaidyas' and 'Ojhas'. They generally treat all kinds of diseases including gynaecological disorders in the locality. They generally diagnose the diseases based on symptoms told by the patients as well as based on their personal experience in treating human ailments. The methods of preparation of herbal medicine 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 is 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 different diseases. In some cases only one part of these plants is utilized for treatment; but in maximum cases multiple parts are used. Medicines are taken orally directly or mixed with water, milk, honey, black pepper etc. It was observed during the course of survey that most of the medicines were 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 mililiter which varies from patient to patient depending on their age, physical health conditions and several other factors. The healers 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, gonorrhoea, syphilis, and impotency, complications before and after birth. It has been found that single plant part is used in many cases but in many condition polyherbal preparation is also 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 accessed for various active phytochemical and pharmacological screening to formulate potent drugs. Recently the phytochemical analysis and anti-bacterial activities of *C. difformis* leaf extract has been studied and which may be the potent source for the new generation of biomedicine [34].

The taxa investigated for the treatment of gynaecological disorders are given below with their scientific names, family, habit, ailments and method of application Table 1-14.

Table 1. Medicinal plants used for the treatment of amenorrhoea

Sl. No.	Scientific name	Habit	Family	Parts used	Mode of application
1	<i>Aloe barbadensis</i> Mill.	Herb	Liliaceae	Leaves	The smooth gel of leaves is taken as such.
2	<i>Carica papaya</i> L.	Herb	Caricaceae	Fruit	Unripe fruits are sliced after peeling and cooked along with ground coconut carnal, green chilly, onion and sufficient quantity of salt. Taken along with rice.
3	<i>Cynodondactylon</i> (L.) Pers.	Herb	Poaceae	Whole plant	Fresh plant parts are ground and mixed in rice soup and taken.
4	<i>Indigoferainctoria</i> L.	Herb	Fabaceae	Whole plant	Powder of plant parts are mixed with butter milk to drink orally.
5	<i>Tamarindusindica</i> L.	Tree	Caesalpinaceae	Root bark	Root bark is rubbed in cow's milk and taken.
6	<i>Vitexnegundo</i> L.	Shrub	Verbenaceae	Root	Fresh roots are crushed and cooked along with rice in the form of porridge and taken daily to menstrual cycle.

Table 2. Medicinal plants used for the treatment of dysmenorrhoea

Sl. No.	Scientific name	Habit	Family	Parts used	Mode of application
1	<i>Acacia leucophloea</i> (L.) Willd.	Tree	Mimosaceae	Leaves, bark	Fresh leaves and powder from the bark juice is taken twice in a week.
2	<i>Achyranthesaspera</i> L.	Herb	Amaranthaceae	Roots	Fresh and Dried root is grinded and decoction is made with water and given to a pregnant women for relief in dysmenorrhoea.
3	<i>Chenopodiumambrosioides</i> L.	Herb	Chenopodiaceae	Leaves	Leaf decoction given to treat painful menstrual flow.
4	<i>Cinnamomumtamala</i> (Buch.-Ham.) T.Nees&C.H.Eberm.	Tree	Lauraceae	Leaves	Leaves of plant and 'Sonapata' (leaves of Cassia senna) are taken in equal proportion and boiled in water. One cup of such decoction is given twice daily for three days.
5	<i>Cissampelospaireira</i> L.	Herb	Menispermaceae	Roots	Roots of the plant with equal volume of 'Labanga' Methi and Kalajira are made into paste. Pill in the size of pea seed obtained from the paste is given at night after bath for consecutive five days.
6	<i>Drimiaindica</i> (Roxb.)	Herb	Liliaceae	Bulb	1/6 part of a bulb of the plant is mixed with seeds of Corchoruscapsularis and Ek Koa Rosun (bulb of Allium sativum) in equal proportion and made into paste. The paste is taken in early morning after bath for consecutive five days.
7	<i>Ecliptaprostrata</i> (Linn.)	Herb	Asteraceae	Plants	Plants along with 'Khudimuni' (Hydrocotylesibthorpoides) in the ratio of 2: 1 are crushed together and the extract thus obtained is given twice a day and is continued for a month.
8	<i>Sesbania grandiflora</i> Pers.	Tree	Fabaceae	Flowers	The juice of the flowers (two teaspoonfuls) is taken twice daily.

Table 3. Medicinal plants used for the treatment of leucorrhoeas

Sl. No.	Scientific name	Habit	Family	Parts used	Mode of application
1	<i>Adhatodavasica</i> Nees	Shrub	Acanthaceae	Root bark	Root and bark juice is taken with honey
2	<i>Amaranthusspinosus</i> L.	Herb	Amaranthaceae	Roots, Stem	Fresh juice of the root (two teaspoon full) is slightly warmed and is given twice daily in Leucorrhoea.
3	<i>Asparagus racemosus</i> Wild.	Herb	Liliaceae	Root	Root paste mixed with the root paste of Ankar (Alangiumsalvifolium), Palash (Butea monosperma), Amlaki (Emblicoefficialis), Ramdantan (Smilax

					avalifolia) and make a common paste which is given for continuous 21 days early in the morning to cure leucorrhoea.
4	<i>Bauhinia malabarica</i> Roxb.	Tree	Caesalpiniaceae	Bark	The stem bark and root bark decoction used with the paste of black peppers (3:1) for the treatment.
5	<i>Boerhaaviadiffusa</i> L.	Herb	Nyctaginaceae	Whole plant	Decoction of plant (15ml) is given once a day in the early morning for fifteen days.
6	<i>Catharanthusroseus</i> (L.) G. Don	Herb	Apocynaceae	Leaf	Leaf juice (5 ml) mixed with honey is given in the early morning for continuous 7 days once a day to treat leucorrhoea.
7	<i>Clerodendrumviscosum</i> Vent.	Herb	Verbenaceae	Leaf, root	Two spoonful paste along with water are administered for continuous 10-15 days to cure white discharges in women.
8	<i>Clitoriaternatea</i> L.	Herb	Fabaceae	Fabaceae	One tea spoonful root paste with black pepper (<i>Piper longum</i>) mixed in water taken in the morning.
9	<i>Cocculushirsutus</i> (L.) Diels	Herb	Menispermaceae	Leaf	Leaf is crust and placed under sunlight the extract is swallowed orally.
10	<i>Cocosnucifera</i> L.	Tree	Arecaceae	Fruit and Fiber	The carnel in the form of paste mixed with cow milk is taken.The young bud is taken orally.
11	<i>Feroniaelephantum</i> Corr.	Tree	Rutaceae	Leaf	5 ml leaf juice mixed with honey is given once a day for 15-20 days used to cure leucorrhoea.
12	<i>Mangiferaindica</i> L.	Tree	Anacardiaceae	Leaves	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.
13	<i>Mucunapruriens</i> (L.) DC.	Herb	Fabaceae	Seed	A pill prepared from powdered seeds boiled with cow milk mixed with Kamraj (<i>Buettneriaherbacea</i>) root dust, sugar and honey is given to cure leucorrhoea.
14	<i>Nelumbonucifera</i> Gaertn.	Herb	Nymphaeaceae	Rhizome.	About 15 ml decoction of rhizomes of white flowered plant is taken by women in empty stomach for fifteen days.
15	<i>Pterocarpus marsupium</i> Roxb.	Tree	Fabaceae	Bark	Paste of bark (1 tea spoonful) mixed with honey used to cure leucorrhoea of women.
16	<i>Pterospermumacerifolium</i> Willd.	Tree	Sterculiaceae	Flower	Flower tonic is useful in leucorrhoea.
17	<i>Sidaacuta</i> Burm. f.	Herb	Malvaceae	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.
18	<i>Sidarhombifolia</i> L.	Herb	Malvaceae	Whole plant	Root paste (1 tea spoonful) mixed with milk is given once a day for 21 days to get relief from leucorrhoea.
19	<i>Smilax zeylanica</i> DC.	Herb	Liliaceae	Root	A decoction is made with water and taken orally after completion of menstrual discharge.
20	<i>Spondiaspinnata</i> Kurtz.	Tree	Anacardiaceae	Wood, root	Wood powder leucorrhoea.
21	<i>Triumfettarhomboides</i> Jacq.	Herb	Tiliaceae	Root powder	Root powder is used in leucorrhoea
22	<i>Vernoniacinerea</i> (Linn.)	Herb	Asteraceae	Whole plant	The Juice of the plant (two teaspoonfuls) is given for 15 days.
23	<i>Commiphorawightii</i> (Arnott.) Bhandaris	Shrub	Burseraceae	Latex	The latex is mixed with the honey and swallowd orally.

Table 4. Medicinal plants used for the treatment of menorrhagia

Sl. No.	Scientific name	Habit	Family	Parts used	Mode of application
1	<i>Adhatodavasica</i> Nees	Shrub	Acanthaceae	Leaves	Fresh leaves are crushed and one tea spoon full of expressed juice is mixed with jaggary. Taken twice daily for 15 days.
2	<i>Aegle marmelos</i> (L.) Corr. Serr.	Tree	Rutaceae	Leaves	Fresh leaves are ground and maid in the form of paste and one tea spoon of paste is mixed one glass of warm water and taken once in early morning in empty stomach for 7 days.
3	<i>Asparagus racemosus</i> Wild.	Herb	Liliaceae	Tuberous root	Fresh tubers roots are crushed and 4 teaspoon full of expressed juice is mixed with sugar and taken 30 mins before food for 7 days.
4	<i>Cassia occidentalis</i> (L.) Link.	Herb	Caesalpiniaceae	Whole plant	Different plant parts are made into powder and mixed with milk to drink orally.
5	<i>Catharanthus roseus</i> (L.) G. Don	Herb	Apocynaceae	Leaf	Leaf juice (5 ml) mixed with honey is given in the early morning for continuous 7 days once a day to treat menorrhagia.
6	<i>Cocos nucifera</i> L.	Tree	Arecaceae	Fruit and Fiber	The carnel in the form of paste mixed with cow milk is taken. The young bud is taken orally.
7	<i>Desmodium triflorum</i> (L.) DC	Herb	Fabaceae	Whole plant	Fresh leaves are crushed and one teaspoon full expressed juice is mixed with one teaspoon honey. Taken twice daily for 3 days.
8	<i>Emblica officinalis</i> Gaertn.	Tree	Euphorbiaceae	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.
9	<i>Ficus benghalensis</i> L.	Tree	Moraceae	Whole plant	Different plant parts are made into powder and mixed with milk to drink orally.
10	<i>Feronia elephantum</i> Corr.	Tree	Rutaceae	Leaf	5 ml leaf juice mixed with honey is given once a day for 15-20 days used to cure menorrhagia.
11	<i>Hibiscus rosa-sinensis</i> L.	Shrub	Malvaceae	Flower	Fresh flowers are boiled in cow's milk and concentrated. Taken once daily for 3 days.
12	<i>Ipomoea paniculata</i> (L.) R.Br.	Tree	Convolvulaceae	Root	Root paste or powder is believed to cure menorrhagia.
13	<i>Lawsonia inermis</i> L.	Herb	Lythraceae	Root, Leaves	Santal women used root (about 4-5 cm long) for causing abortion up to 3-4 months of pregnancy. Leaf passed mixed of black peppers (5:3) for the treatment.
14	<i>Mangifera indica</i> L.	Tree	Anacardiaceae	Leaves	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 menorrhagia
15	<i>Mucunapruriens</i> (L.) DC.	Herb	Fabaceae	Seed	A pill prepared from powdered seeds boiled with cow milk mixed with Kamraj (<i>Buettneria herbacea</i>) root dust, sugar and honey is given to cure menorrhagia.
16	<i>Musa paradisiaca</i> L.	Herb	Musaceae	Stem juice	The stem juice one cup is taken twice daily for one month.
17	<i>Oroxylum indicum</i> (L.) Vent.	Tree	Bignoniaceae	Stem bark	Decoction of stem bark (2ml) with common salt (1gm) is prescribed twice a day for one month.
18	<i>Phyllanthus franternus</i> Webster	Herb	Euphorbiaceae	Whole plant	Stem decoction with rice water (3:2) used for the treatment of menorrhagia by lodhas. Santal used plant pasted with the decoction of black peppers (5:3) for the treatment of genital treatment.
18	<i>Pterocarpus marsupium</i> Roxb.	Tree	Fabaceae	Bark	Paste of bark (1 tea spoonful) mixed with honey used to cure menorrhagia of women.
19	<i>Semecarpus anacardium</i> L.	Tree	Anacardiaceae	Seed	Seed dust (2 gm) mixed with honey and cow milk applied to treat menorrhagia and

	f.				other venereal diseases like syphilis etc. Gum from bark believed to cure venereal diseases.
20	<i>Spondiaspinnata</i> Kurtz.	Tree	Anacardiaceae	Root	Root paste regulates menstrual cycle.
21	<i>Wedeliachinensis</i> Merr.	Herb	Asteraceae	Whole plant	5 ml decoction mixed with water given to women for continuous 21 days in empty stomach to treat menorrhagia.

Table 5. Medicinal plants used for the treatment of menometrorrhagia

Sl. No.	Scientific name	Habit	Family	Parts used	Mode of application
1	<i>Erythrinastricta</i> Roxb.	Tree	Fabaceae	Aqueous extract	Aqueous extract (two teaspoonfuls) of the stem bark is prescribed thrice a day.
2	<i>Justiciagendarussa</i> Burm. f.	Herb	Acanthaceae	Leaf	Fresh juice of the leaf (three teaspoonfuls) is prescribed thrice a day.
3	<i>Nymphaea rubra</i> Roxb.	Herb	Nymphaeaceae	Flower	Powder of dried flower is mixed with honey and made into pills in the size of pea seeds. One pill is given thrice daily for five days.
4	<i>Butea monosperma</i> (Lam.)	Tree	Fabaceae	Flower bud	Juice of the flower bud is given twice

Table 6. Medicinal plants used for the treatment of Metrorrhagia

Sl. No.	Scientific name	Habit	Family	Parts used	Mode of application
1	<i>Dalbergiasissoo</i> Roxb.	Tree	Fabaceae	Root, Leaves	Root paste mixed with cassia occidentalis (2:1) for treatment. Leafs decoction is mixed with black papers taken orally.

Table 7. Medicinal plants used for the treatment of oligomenorrhoea

Sl. No.	Scientific name	Habit	Family	Parts used	Mode of application
1	<i>Aloe vera</i> (L.) Burm.f.	Herb	Liliaceae	Leaf	Leaf juice (5gm) along with tumeric and black salt is taken twice daily in empty stomach to cure oligomenorrhoea.
2	<i>Andrographispaniculata</i> Wall.ex.Nees.	Herb	Acanthaceae	Whole plant	Powder of different plant parts are mixed with hot water to drink orally.
3	<i>Aristolochiaindical</i>	Herb	Aristolochiaceae	Root	Root powder (2 gm) mixed with water applied in empty stomach for 21 days.
4	<i>Bombaxceiba</i> L.	Tree	Bombacaceae	Fleshy roots	Pasty mass of fleshy roots of young plant (1 gm) mixed with unboiled cow milk (2ml) is taken once a day in the early morning for a week by women to regulate irregular menstruation.
5	<i>Borreriaarticularis</i> (L.f.) Williams	Herb	Rubiaceae	Whole plant	For the regulation of excessive menstrual flow root paste (15gm) with hot water is taken by women in empty stomach just starting of their periods.
6	<i>Cardiospermumhelicacabum</i> L.	Herb	Sapindaceae	Root extract	Leaf extract is taken to relieve from this menstrual disorder.
7	<i>Cassia fistula</i> L.	Tree	Caesalpiniaceae	Stem bark	Paste of stem bark or powder (2 tea spoonful) mixed with black pepper is given to women for 7 days to treat this menstrual disorder.

8	<i>Centellaasiatica</i> (L.) Urb.	Herb	Apiaceae	Whole plant	Leaf juice (2 spoonful) mixed water is given for 7 days is empty stomach to treat oligomenorrhoea.
9	<i>Cissusquadrangul aris</i> L.	Herb	Vitaceae	Whole part	Stem juice used to cure irregular menstruation
10	<i>Cynodondactylon</i> (L.) Pers.	Herb	Poaceae	Whole plant	Powder of different plant parts are mixed with hot water to drink orally.
11	<i>Micheliachampaca</i> L.	Tree	Magnoliaceae	Stem bark	Dried stem bark (2 gm) mixed with water is administered twice a day for 15 days to cure irregular menstruation cycle.
12	<i>Moringaoleifera</i> Lam.	Shrub	Moringaceae	Root, bark, gum	Root and bark (1 tea spoonful) mixed with warm milk is given for 15 days to treat menstrual disorders.
13	<i>Polyalthialongifolia</i> (Sonn.) Thw.	Tree	Annonaceae	Root bark	Root bark powder is given in menstrual disorder.
14	<i>Pongamiapinnata</i> (L.) Pierre.	Tree	Fabaceae	Seed	Seed powder with passed black peppers (2:1) is used for the treatment.
15	<i>Salmaliamalabarica</i> (DC.) Schott. And Endl.	Tree	Bombacaceae	Root	Powder of dried root is taken orally with water or with meals.
16	<i>Syzygiumcumini</i> (L.) Skeels.	Tree	Myrtaceae	Root, stem bark, leaves and fruits	Powder of different plant parts are mixed with hot water to drink orally.

Table 8. Medicinal plants used for the treatment of uterine haemorrhage

Sl. No.	Scientific name	Habit	Family	Parts used	Mode of application
1	<i>Solanumindicum</i> L.	Herb	Solanaceae	Fruit	Fruit paste is taken orally.
2	<i>Wedeliachinensis</i> Merr.	Herb	Asteraceae	Whole plant	5 ml decoction mixed with water given to women for continuous 21 days in empty stomach to treat uterine haemorrhages.

Table 9. Medicinal plants used for the treatment of infertility

Sl. No.	Scientific name	Habit	Family	Parts used	Mode of application
1	<i>Acacia leucophloea</i> (L.) Willd.	Tree	Mimosaceae	Leaves, bark	Fresh leaves and powder from the bark juice is taken twice in a week.
2	<i>Asparagus racemosus</i> Wild.	Herb	Liliaceae	Root	Root paste mixed with the root paste of Ankar (<i>Alangiumsalvifolium</i>), Palash (<i>Butea monosperma</i>), Amlaki (<i>Emblicaofficinalis</i>), Ramdantan (<i>Smilax ovalifolia</i>) and make a common paste which is given for continuous 21 days early in the morning to cure.
3	<i>Azadirachtaindica</i> A. Juss.	Tree	Meliaceae	Whole plant	Different plant parts are powder along with the jaggery is taken orally.
4	<i>Ipomoea paniculata</i> (L.) R.Br.	Tree	Convolvulaceae	Root	Root paste or powder is believed to increase sexual desire (acts as an aphrodisiac).
5	<i>Mucunapruriens</i> (L.) DC.	Herb	Fabaceae	Seed	A pill prepared from powdered seeds boiled with cow milk mixed with Kamraj root dust, sugar and honey is given to cure impotency.
6	<i>Phyla nodiflora</i> (L.) Greene.	Herb	Verbenaceae	Root	Decoction of root (3ml) with unboiled egg (2mg) is given to women to promote sexual desire.

7	<i>Sidaacuta</i> Burm. f.	Herb	Malvaceae	Leaf, root	10 ml leaf juice with 10 ml root decoction is given to cure impotency.
8	<i>Withaniasomnifera</i> (L.) Dunal	Herb	Solanaceae	Root	Lodhas give root passed with the passed of Curcuma longer (3:1) for the treatment.

Table 10. Medicinal plants used for the treatment of spontaneous abortion

Sl. No.	Scientific name	Habit	Family	Parts used	Mode of application
1	<i>Saracaasoca</i> (Roxb.)	Tree	Caesalpiniaceae	Flower buds	Flower buds (5-7 in number) are chewed by the pregnant women in the early period of pregnancy to spontaneous abortion.
2	<i>Solanumxanthocarpum</i> Schrad.	Herb	Solanaceae	Root	Lodhas give root passed with the passed of Curcuma longer (3:1) for the treatment.

Table 11. Medicinal plants used for the treatment of postpartum haemorrhage

Sl. No.	Scientific name	Habit	Family	Parts used	Mode of application
1	<i>Mimosa pudical.</i>	Herb	Mimosaceae	Leaves	Leaves are collected and made into paste is given orally.
2	<i>Terminalia arjuna</i> (Roxb) Wt. Ar.	Tree	Combretaceae	Root, stem bark, leaves and fruits	Different plant parts powder is mixed with honey to taken orally for 1 week. Fresh fruits are taken as such
3	<i>Solanumindicum</i> L.	Herb	Solanaceae	Fruit	Fruit paste is taken orally.

Table 12. Medicinal plants used for the treatment of Gonorrhoea

Sl. No.	Scientific name	Habit	Family	Parts used	Mode of application
1	<i>Anacardiumoccidentale</i> L.	Tree	Anacardiaceae	Leaves	The gum from the bark, the pulp from the fruits and a delicious drink from the spongy thalamus taken regularly in the morning.
2	<i>Bacopamonniери</i> (L.) Penn.	Herb	Scrophulariaceae	Plant	Plant extract is taken to treat gonorrhoea
3	<i>Costusspeciosus</i> (J. Koenig ex. Retz.) Sm.	Herb	Costaceae	Leaves, roots	Powder of root is prepared and one spoon of root powder is taken orally with cold water. Twice daily for 2-10 days.
4	<i>Emblicaofficinalis</i> Gae rtn.	Tree	Euphorbiaceae	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 gonorrhoea.
5	<i>Enydrafluctuans</i> Lour	Herb	Asteraceae	Leaf	The leave juice taken in empty stomach for 15 days
6	<i>Ixoracoccineal.</i>	Shrub	Rubiaceae	Whole part	Root bark and flowers crashed with honey and used once in a week.
7	<i>Micheliachampaca</i> L.	Tree	Magnoliaceae	Flower, fruit	Flower and fruits is believed to cure gonorrhoea.
8	<i>Moringaoleifera</i> Lam.	Shrub	Moringaceae	Root, bark, gum	Root and bark (1 tea spoonful) mixed with warm milk is given for 15 days.
9	<i>Ocimumgratissimum</i> L.	Herb	Lamiaceae	Whole plant	The extracts of whole plants is used.
10	<i>Petalium murex</i> L.	Herb	Pedaliaceae	Leaves, Fruits	Leaves and fruit juice are used at regular interval.
11	<i>Pterospermumacerifol</i>	Tree	Sterculiaceae	Stem bark, petiole	Decoction of stem bark and petiole mixed with water is given for 7-10 days

	<i>ium</i> Willd.				continuously early in the morning to cure gonorrhoea..
12	<i>Scopariadulcis</i> L.	Herb	Scrophulariaceae	Whole plant	Extract of fresh plant use daily in the morning.
13	<i>Sidaacuta</i> Burm. f.	Herb	Malvaceae	Seed	Seed dust (1 tea spoonful) mixed with water is given 7-10 days continuously to treat gonorrhoea.
14	<i>Spondiaspinnata</i> Kurtz.	Tree	Anacardiaceae	Wood	Wood powder is used in gonorrhoea.
15	<i>Opuntiadillenii</i> Haw	Herb	Cactaceae	Baked fruit juice	Baked fruit juice is taken with honey to treat gonorrhoea.

Table 13. Medicinal plants used for the treatment of Gonorrhoea and Syphilis

Sl. No.	Scientific name	Habit	Family	Parts used	Mode of application
1	<i>Argemonemexicana</i> L.	Herb	Papaveraceae	Roots, Seeds	Leaf juice is taken by women twice a day for fifteen days.
2	<i>Curculigoorchiooides</i> Gae rtn.	Herb	Amaryllidaceae	Root	Powder of dried Kalimusli (<i>Curculigoorchiooides</i>), Kalimirch and Illaichi is prepared in tablet form. Two capsule is taken in morning and evening after meal. Twice daily for 15 days.
3	<i>Gloriosasuperba</i> L.	Herb	Liliaceae	Whole plant	Tuberous roots extract taken twice in a week.
4	<i>Gossypiumhirsutum</i> L.	Shrub	Malvaceae	Leaves, Root	Extract mixed with rice washing water for 7 days.
5	<i>Ipomoea paniculata</i> (L.) R.Br.	Tree	Convolvulaceae	Root	Root paste or powder is believed to cure gonorrhoea and syphilis.
6	<i>Jatrophaacurcus</i> L.	Shrub	Euphorbiaceae	Leaves	Pultice of leaves used regularly.
7	<i>Portulacaoleracea</i> L.	Herb	Portulacaceae	Whole part	Extract of whole plant is administrated in the morning for 3-5 days.
8	<i>Pouzolziazeylanica</i> (L.) Benn.	Herb	Urticaceae	Whole plant	The extract of whole plant mixed with honey prescribed for 2-3 days in a week.
9	<i>Premnaarborea</i> Roth	Herb	Lamiaceae	Leaves	Leaf extract taken 2-3 days per week.
10	<i>Semecarpusanacardiu</i> mL.f.	Tree	Anacardiaceae	Seed and gum from bark	Seed dust (2 gm) mixed with honey and cow milk applied to treat syphilis and gum from bark to cure gonorrhoea.

Table 14. Medicinal plants used for the treatment of Syphilis

Sl. No.	Scientific name	Habit	Family	Parts used	Mode of application
1	<i>Abutilon indicum</i> L.	Herb	Malvaceae	Leaves	Lodhas apply leaf juice with the leaf paste of <i>Pongamiapinnata</i> in the ratio of 2:1.
2	<i>Areca catechu</i> L.	Tree	Arecaceae	Nut	The powder of the nut mixed with the black papper and taken once in a weak.
3	<i>Centellaasiatica</i> (L.) Urb.	Herb	Apiaceae	Whole plant	Leaf juice (2 spoonful) mixed water is given for 7 days is empty stomach.
4	<i>Curcuma longa</i> L.	Herb	Zingiberaceae	Flower, Rhizome	Pultice of rhizome and flower buds used.
5	<i>Hemidesmusindicus</i> R. Br.	Herb	Asclepiadaceae	Root	Paste of fresh root is prepared and taken orally in morning and evening. Twice daily for 1-2 days.
6	<i>Plumbagoindica</i> L.	Herb	Plumbaginaceae	Leaves, stems	Root paste (1 tea spoonful) mixed with honey is given early in the morning.

CONCLUSION

The present study focused on rural women's health and treatment. Herbal medicines are like a blessing in rural areas, where modern medical facilities are not available or insufficient. However the knowledge about herbal remedies is declining day by day as the new generation in rural area is not much interested in it and many of the practitioner are of very old age. It is necessary to put more efforts in the documentation of such knowledge before it get vanished. Also clinical pharmacological validation is required for the formulation to check their efficacy. The highly interesting findings for gynecological disorder require further research, while the efficacy of the various indigenous practices will need to be subjected to pharmacological validation. Greater efforts are therefore required to document this traditional knowledge of people to have a comprehensive account of it, which will open new vistas in local plant research and

emerge as safe, less costly and Eco-friendly methods of the treatment of gynaecological disorders. As the little information about the chemical components of these plants available up till now future research work hopefully will find out the detail bioactive components for the treatment of gynaecological disorder.

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AUTHORS' CONTRIBUTION

D.C. Das: Investigate the detail information of the plants. N. K. Sinha: Investigate the detail information of gynaecological disorders. M. Das: Investigate the detail information of gynaecological disorders.

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