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ETHNOBOTANICAL NOTES ON SOME PLANTS USED FOR THE TREATMENT OF LEUCORRHOEA AND OTHER GYNECOLOGICAL PROBLEMS IN HAMIRPUR DISTRICT OF HIMACHAL PRADESH

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ABSTRACT

Hamirpur district is the smallest district of Himachal Pradesh which is surrounded by thick forests. This district serves as good hot spot for the growth of various types of medicinal herbs. The local use of various plants for the treatment of various diseases and ailments has been an old practice. But this practice nowadays forms the basis of new plant based medicinal therapy for the treatment of various disorders. Leucorrhoea is mostly seen gynecological problem among the females of this region. The females of this region still have a good faith on use of local plants for the treatment of various health related problems. The present paper reveals the use of 27 local plant species especially used to cure Leucorrhoea and other gynecological problems.

Key Words: *Dysmenorrhoea, Leucorrhoea, Oligomenorrhoea and Traditional Medicine*

INTRODUCTION

Leucorrhoea is a medical term which denotes a thick whitish and yellowish vaginal discharge. The main cause of Leucorrhoea is the estrogen hormone imbalance. The amount of vaginal discharge may increase due to vaginal infection and due to sexually transmitted diseases (STDs). This vaginal discharge may disappear or reappear time to time. This discharge can keep occurring for years in which case it becomes more yellow and foul smelling, it is usually a non pathological symptoms secondary to inflammatory conditions of vagina. Leucorrhoea is not a major issue but it can be resolved as soon as possible. It is a kind of natural defense mechanism that vagina uses to maintain its chemical balance as well as to preserve the flexibility of vaginal tissue. Leucorrhoea may occur normally during pregnancy. This caused by increased blood flow to vagina due to increased amount of estrogen hormone. Female infants may have leucorrhea after birth due to their in-uterine exposure to estrogen hormone. Leucorrhoea after delivery is accompanied by backache (Back pain) and foul smelling lochia which may suggest the failure of involution (the uterus returning to pregnancy size) due to infection. Leucorrhoea is of mainly of two types-(1) inflammatory leucorrhea- it may result from inflammation or congestion of vaginal mucosa. (2) Physiological Leucorrhoea - it is due to estrogen hormone stimulation.

In spite of leucorrhea which is mostly seen gynecological problem among the females of study region, some other common gynecological problems prevailing in the study region are-Amenorrhoea or stoppage of menstrual flow, Dysmenorrhoea or period pains, Emotional stress, Leucorrhoea, menorrhagia or excessive menstrual flow, menstrual cramps, nervousness, oligo-menorrhea or irregular periods, post-delivery pains etc.

Hamirpur district is the smallest district of Himachal Pradesh due to its area. But due to favourable environment and climatic conditions, this region acts as store-house of medicinal wealth. Local peoples of this area have good knowledge about pattern of use of local medicinal plants for the treatments of various diseases and ailments. Traditional medicine becomes an integral part of health system in this region. This ethnic knowledge is falling prey to the lure of modernization therefore it was an urgent need to study and document this precious knowledge for posterity (Rawat and Kharwal 2011). This paper reveals the traditional use of 27 medicinal plants of Hamirpur district of Himachal Pradesh for the treatment of Leucorrhoea and other gynecological problems.

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REVIEW OF LITERATURE

Ethnobotany is totally in virtually a new field of research, if in this field plants investigated thoroughly and systematically, it will yield result of great value of the archeologists, anthropologist, plant geographer, ethnobotanist, linguistics, botanists and phytochemists. After the time of Harshberger (1896) to the present date, several authors have tried to give a description of subject ethnobotany and its scope, methodology, its various disciplines sub-disciplined and potential etc. Schutles (1960) had written on tapping our heritage ethnobotanically. He had suggested three methods of ethnobotany among the primitive peoples. He also gave some examples of the plant used during ancient period. Jain (1964) wrote on the role of botanist in folk lore research. He writes that folklore research involves the study of all aspect of intellectual and material culture of indigenous or backward people. Jain (1965C) outlined the prospects by some new or less known medicinal plants resources. Sharma (1976) studied some useful wild plant of Himachal Pradesh. Uniyal and Chauhan (1982) studied commercially important medicinal plant of the Kullu forest division in H.P. Jain (1986) gave an overview of the subject ethnobotany, an indication of the significant research during last thirty year in this field and also showed how ethnobotany is an interdisciplinary science. Schutles (1986) tried to bring the attention of scientists to ethnobotanical conservation. For many years, he has been engaged on the studies in pristine forest of the Amazon and other regions of tropical South America. Arora (1987) described ethnobotany and its role in the domestication and conservation of native plant genetic resources. He gave the detail account of this important area where ethnobotanians have still a great to do.

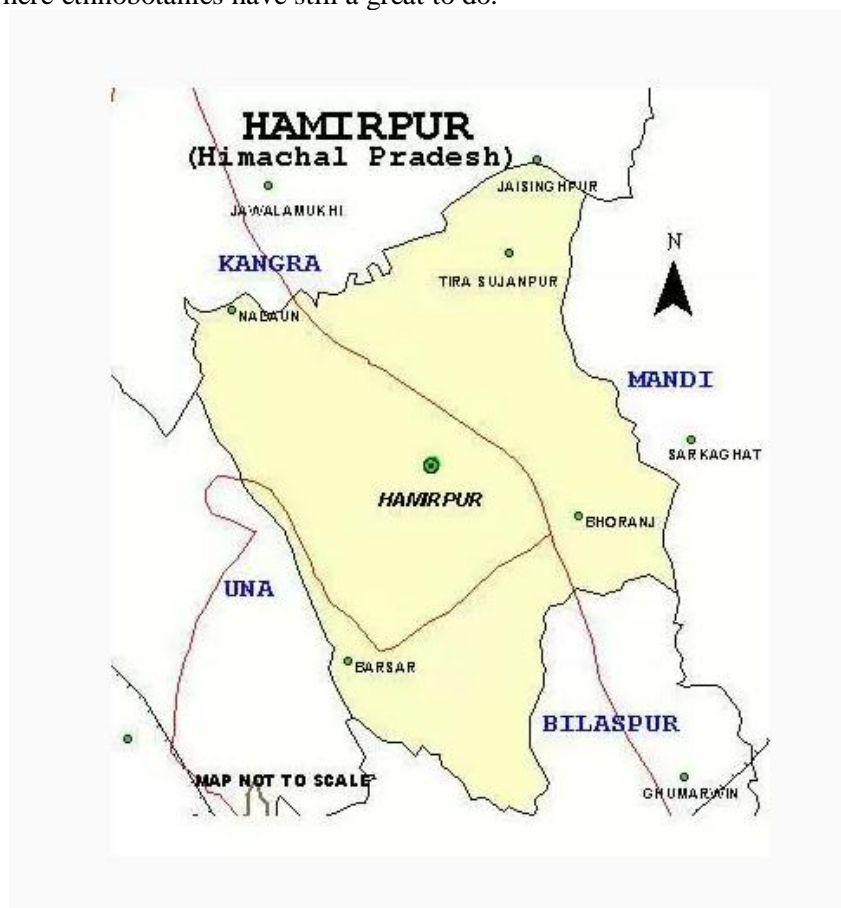


Figure 1: Map of Hamirpur District

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Uniyal (1989) highlighted the Garwhal Himalaya in his “Notes on the Ethnobotany of Lahoul, a province of the Punjab”. Kapur (1996) highlighted the traditionally important medicinal plant of Bhaderwah hill. Singh (1999) worked on the ethno-botanical study of the useful plants of the Kullu district in Himachal Pradesh. Sharma *et al.*, (2000) studied the ethnobotanical studies of Gaddi- a tribal community of the Kangra district, Himachal Pradesh. Singh and Kumar (2000) studied the ethnobotanical wisdom of Gaddi tribe in the western Himalaya (Himachal Pradesh) Thakur S. (2001) described the ethnobotany of Rawalsar (Mandi District), Himachal Pradesh. Sharma *et al.*, (2003) gave an account on the commercial importance of medicinal and aromatic plants of Parvati Valley (Himachal Pradesh). Thakur *et al.*, (2004) described the characterization of some traditional fermented food and beverages of Himachal Pradesh. Kala (2005) described on the ethno-medicinal botany of the Atapani in the Eastern Himalaya Region of India. Jain *et al.*, (2006) worked on the Ethnobotanical Survey of Sariska and Siliserh Regions in Alwar district of Rajasthan, India. BrijLal and Singh (2008) find out the indigenous herbal remedies to cure skin disorders by natives of LahaulSpiti, Himachal Pradesh. Prakash & Aggarwal (2010) highlighted the traditional uses of medicinal plants of lower foot-hills, Himachal Pradesh. Kaur, *et al.*, (2011) studied the uses of plants in control of different diseases in Mandi district, Himachal Pradesh. Kharwal and Rawat (2012) studied ethnobotanical uses of herbal shampoo of Shivalik Hills, Himachal Pradesh (India).

Study Area

Hamirpur district is situated between 76°18' – 76°44' East longitudes and 31°52'30" North latitudes. The track is hilly covered by Shivalik range and the elevation varies from 450-1,100 meters. This region is rich in diverse flora and suitable for studies related to medicinal plants various plants are used for the treatment of Leucorrhoea and other gynecological problems.

MATERIALS AND METHODS

The ethnobotanical surveys were conducted throughout the study period in different area of Hamirpur district, among the local people. The plant specimens were collected during these surveys were identified and preserved in the form of Herbarium. The field data was compared with literature on the medicinal plants of Himachal Pradesh; some literature of ethnobotany has also been considered like Pushpangadan and Kumar (2005) and Rawat and Kharwal (2011). The 27 medicinal plants belonging to 18 families were reported which are used to cure Leucorrhoea and other gynecological problems. The methods used to collect the data:

Plants were collected and preserved in the form of herbarium.

The information was collected from the elderly persons of the area.

Interviews were conducted using structured questionnaire prepared for medicinal practitioners.

Plants were identified and nomenclatured with the help of Choudhary and Wadhwa's Flora of Himachal Pradesh.

RESULTS

Ethnobotanical investigations revealed the use of 27 plant species of study area for treatment of Leucorrhoea and other gynecological problems:

(1) *Abrus precatorius* Linn.

Family: Fabaceae

Local name: Ratti

Parts used: Root

Medicinal use: Roots powder is used for treating abortion.

(2) *Acacia nilotica* (L.) Dilile.

Family: Fabaceae

Local name: Kikar, Babul

Part used: Gum

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Medicinal uses: Gum along with latex of *Calotropis procera* is given to stop bleeding, urinary and vaginal discharge mainly in case of Leucorrhoea

(3) *Argemone Mexicana* Linn.

Family: Papaveraceae

Local name: Barbhand

Medicinal uses: Tea prepared from roots is given for regulating fertility in women.

(4) *Asparagus adscendens* Roxb.

Family: Liliaceae

Local name: sansban

Parts used: Roots, twigs and leaves

Medicinal use: Polutices of roots, twigs and leaves applied on stomach to cure menorrhagia. One cup of root decoction is taken by women as a tonic three times a day for two weeks after delivery. Root is also useful in case female impotency.

(5) *Butea monosperma* (Lamk.) Taub.

Family: Papilionaceae

Local name: Dhak, Palah, Plash.

Parts used: Bark

Medicinal use: Dried powdered bark is taken two times a day for a week in case of menstrual disorder.

(6) *Capillipedium assimile* (Steund.) Camus.

Family: Poaceae

Local name: Tooli- gha

Parts used: Stem

Medicinal use: Chewing of stem is beneficial in case of vaginal discharges or Leucorrhoea

(7) *Cissampelos pareira* Linn.

Family: Menispermaceae

Local name: Patindu

Parts used: Root

Medicinal use: Paste of root is employed to check Leucorrhoea

(8) *Cuscuta reflexa* Roxb.

Family: Convolvulaceae

Local name: Akashbel

Parts used: Stem

Medicinal use: One spoon of decoction of stem is given once in the morning for 4-5 days to induce abortion at early stage of pregnancy.

(9) *Dalbergia sisso* Roxb.

Family: Fabaceae

Local name: Talhi

Parts used: Leaves

Medicinal use: Powder of dried leaves is taken with sugar for the treatment of Leucorrhoea and menorrhagia

(10) *Datura stramonium* Linn.

Family: Solanaceae

Local name: ChittaDatura

Parts used: Whole plant

Medicinal use: Extract of whole plant material is useful in case of Dysmenorrhea or period pain

(11) *Embllica officinalis* Gaertn

Family: Euphorbiaceae

Local name: Amla

Parts used: Fruit

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Medicinal use: Fruit is a rich source of vitamin – C . Fruit is recommended well in case of Leucorrhoea, menorrhagia and discharge of blood from the uterus.

(12) *Juglan regia* Linn.

Family: Juglandaceae

Local name: Khor, Akhrot.

Parts used: Leaves Bark.

Medicinal use: Paste of dried powdered leaves is used in case of Leucorrhoea. Decotion of bark is used to check menorrhagia and to check mammary secretion.

(13) *Lycopersicum esculentum* Mill.

Family: Solanaceae

Local name: Tamatar

Parts used: Flowers

Medicinal use: Dried flowers powder is considered good for the treatment of oligomenorrhoea or irregular period.

(14) *Melothria heterophylla* Boiss.

Family: Cucurbitaceae

Local name: Bankakdi, Krokadi.

Parts used: Root

Medicinal use: Paste of roots with turmeric powder cures antifertility and labour pain.

(15) *Prunus cerasoides* D.Don.

Family: Rosaceae

Local name: Pajja

Parts used: Branches

Medicinal use: The smaller branches are crushed and soaked in water in case of pregnancy and is also taken internally to stop abortion.

(16) *Raphanus sativus* Linn.

Family: Brassicaceae

Local name: Mooli

Parts used: Roots, Fleshy part.

Medicinal use: Root decotion is good for the treatment of Leucorrhoea. Fleshy part is eaten raw and its juice is recommended good for treatment of menstrual disorders.

(17) *Rauvolfia serpentina* Benth.ex Kurtz.

Family: Apocynaceae

Local name: Sarapgandha

Parts used: Root

Medicinal use: Decotion of roots is used during labour pain to increase uterine contraction.

(18) *Ricinus communis* Linn.

Family: Euphorbiaceae

Local name: Arand, Erand.

Parts used: Seed

Medicinal use: Oil obtained from seeds known as castor oil is used for facilitating easy birth of child which is doubtful. This oil is also used as purgative for pregnant women and during menses.

(19) *Sarca indica* Linn.

Family: Caesalpiniaceae

Local name: Sita Ashok

Parts used: Bark

Medicinal use: Bark powder is useful in case of menorrhagia and uterine infection.

(20) *Sesamum orientale* Linn.

Family: Pedaliaceae

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Local name: Til

Parts used: Seed

Medicinal use: Oil extracted from seeds is used as a massage during post-delivery pain.

(21) *Smilax aspera* Linn.

Family: Liliaceae

Local name: Baagru –Bel

Parts used: Whole plant

Medicinal use: 2-3 gram of dried powdered plant material is recommended three times a day for 8-10 days to cure yellow Leucorrhoea.

(22) *Solanum vivarum* Dunal.

Family: Solanaceae

Local name: Kandayai, Ban Bhindi.

Parts used: Fruit, Seed.

Medicinal use: Powder of fruits and seed is useful in case of menstrual complaints.

(23) *Terminalia chebula* Retz.

Family: Combretaceae

Local name: Harad

Parts used: Fruit

Medicinal use: Dried fruit powder is beneficial during vaginal discharge or Leucorrhoea.

(24) *Tinospora cordifolia* Miers.

Family: Menispermaceae

Local name: Galoein, Guljya.

Parts used: Stem

Medicinal use: Starch of stem is mixed with wheat flour and then roasted in butter is recommended for the treatment of Leucorrhoea and menorrhagia.

(25) *Trigonella foenum-graceum* Linn.

Family: Fabaceae

Local name: Methi

Parts used: Seed

Medicinal use: Powdered dried seeds taken orally with warm water for abdominal pain during menstrual flow.

(26) *Woodfordia fruticosa* Kurtz.

Family: Lythraceae

Local name: Dhavi, Tel chauli.

Parts used: Flowers

Medicinal use: Decotion of flowers is useful for the treatment of Leucorrhoea, menorrhagia and act as stimulant in pregnancy.

(27) *Xanthium strumarium* Linn.

Family: Asteraceae

Local name: Banokra, Chotta dhatura

Parts used: Aerial plant parts

Medicinal use: The drug extracted from aerial plant parts is beneficial for the treatment of Leucorrhoea and urinary diseases.

DISCUSSION

The present study revealed the use of 27 plant species belonging to 18 families which are used for the treatment of leucorrhoea and other gynecological problems. Among these families the predominant families are Fabaceae with 5 plant species, Solanaceae with 3 plant species, Euphorbiaceae, Liliaceae and Menispermaceae with 2 plant species and other families with 1 plant species. The plant species such as *Acacia nilotica*, *Capillipedium*

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assimile, *Cissampelos pareira*, *Dalbergia sisso*, *Embllica officinalis*, *Jugan regia*, *Raphanus sativus*, *Sarca indica*, *Smiles aspara*, *Terminalia chebula*, *Tinospora cordifolia*, *Woodfordia fruticosa*, *Xanthium strumarium* are the plant species which are mainly used by the local people of study area for the treatment of Leucorrhoea and Menorrhagia . Other plant species are used for the treatment of other gynecological problems such as – Dysmenorrhoea, Oligomenorrhoea and post-delivery pain etc

Conclusions

The popular use of herbal remedies among the rural people in Hamirpur District of Himachal Pradesh reflects the great interests of people in the tradition medicine. The scientific validation of these remedies may help in discovering new drugs from the plant species. The information on the therapeutic uses of plants may provide a great potential for discovering new drugs and promoting awareness among the people to use them as remedy in primary health care system.

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