

Treatment of Gynecological Disorders by Ethno medicines in Santhal Paraganas, Jharkhand

Anuradha Das ¹, Anita Chakraborty ²

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Abstract

The tribal and indigenous communities of the Santhal Paraganas like the *Santhals*, *Paharias*, *Koras*, *Kols*, *Mahalis*, *Bhumijis*, etc. use to live besides forests and hilly areas in the rural and outskirts of the main towns. For their primary health care, they are basically dependent on the local medicinal practitioners like, *Ojhas*, *Manjhis*, *Pahans*, *Horopaths*, *Jangurus*, *Kabirajs*, *Vaidyas* etc. of the villages. These medicinal practitioners are treating a number of ailments and diseases including the gynecological disorders by the available ethno medicines, out of the experiences they have obtained verbally, from their forefathers and ancestors practicing since long. The present paper is an endeavor to document this traditional knowledge of treating various gynecological disorders signifying the potential of various ethno medicinal plants growing in the region. A total of 35 ethno-medicinal plants are enumerated with their botanical names, local names, families, parts of different plants used for treatment and mode of use.

This will also provide future scope for further experimentations and researches of various economically important plant species along with their vital medicinal prospects, which are being utilized by these people to meet their health and nutritional requirements.

Key words: Gynecological disorders, ethno medicines, Jharkhand, medicinal plants.

Corresponding Author

¹ Dept. of Botany, Sindri College, Sindri, BBMK University, Dhanbad Jharkhand email anuradha.das84@gmail.com

² Dept of Botany, SSLNT M College, BBMK University, Dhanbad Jharkhand

Introduction

Women play a significant role in every society, be it tribal or non-tribal. In sustaining the family and upholding their responsibilities, they usually avoid their physical uneasiness and disorders facing in their daily lives. And when the question of the gynecological disorders come, they do not even want to discuss the problems

due to shyness and fear of defame in the society, making the conditions, bad to worse. Gynecological disorder is a condition which affects the female reproductive organs namely the breasts and the organs in the abdominal and pelvic area including the womb (uterus), ovaries, fallopian tubes, vagina and vulva ()

The tribal and indigenous communities of the Santhal Paraganas like that of the *Santhals, Paharias, Koras, Kols, Mahalis, Bhumijis*, etc. use to live besides forests and hilly areas in the rural and outskirts of the main towns. For their primary health care, they are basically dependent on the local medicinal practitioners like, *Ojhas, Manjhis, Pahans, Horopaths, Jangurus, Kabirajs, Vaidyas* etc. of the villages. These medicinal practitioners are treating a number of ailments and diseases including the gynecological disorders by the available ethno medicines, out of the experiences they have obtained verbally, from their forefathers and ancestors practicing since long.

The present paper is an endeavor to document this traditional knowledge of treating various gynecological disorders signifying the potential of various ethno medicinal plants growing in the region. A total of 35 ethno-medicinal plants are enumerated with their botanical names, local names, families, parts of different plants used for treatment and mode of use.

Study area

Santal Paraganas, derives its name from two words: “*Santals*”, a major tribe of India and “*Paraganas*” a Persian word meaning district. It is being provided to the *Santals* by the British government. Presently, this administrative division comprises six districts of Jharkhand: Godda, Deoghar, Dumka, Jamtara, Sahibganj and Pakur (Bhatt, 2002) (Fig. 1).

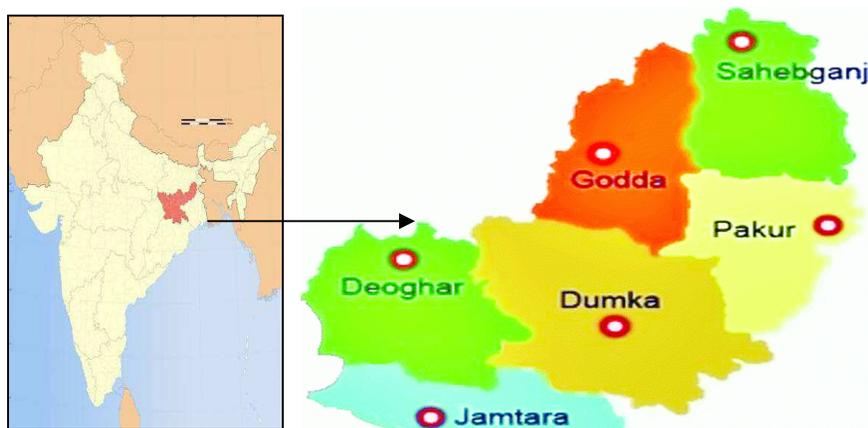


Fig. 1. Map representing the study area Santal Paraganas of Jharkhand.

Although several ethno-botanists like Bodding 1925; Varma 1981; Hembrom 1991; Lal and Singh 2012; Singh, C.B. 2018; etc. have worked in this field, still a major portion of the region is still unexplored. Ethno-botanical studies like Borthakur and Gogoi, (1994) have also showed that inventory preparations of indigenous knowledge through ethno-botanical studies are important for the conservation as well as sustainable utilization of the bio-resources. Present study is an endeavour in this direction.

Materials and methods

For the purpose different tribal areas located in the different districts of Santal Paraganas were surveyed randomly since 2018-2020. The first hand data were collected through interviews and with the help of local guides, villagers, local herbal practitioners and tribal persons, women who had the traditional knowledge about of ethnomedicines. They have quite deep knowledge about the herbal medicines (Das et. al., 2016). The tribal herbal practitioners locally called *Jangurus*, *Ojhas*, *Kavirajs*, *Vaidyas*, *Pahans*, *Manjhis*, *Horopaths*, etc. were interviewed to collect information about the ethnomedicinal uses. At the same time, field visit were also undertaken along with the villagers in the weekly local markets, called *Haats* or *Hatias* to see the availability of these etnomedicinal plants. Following the first hand data given by these people, a total of 35 ethnomedicines were collected and properly tagged with their local names, from this region. Plants species were visited regularly in different seasons in order to observe the species in their natural flowering and fruiting condition. Collected plants were processed and herbarium specimens were prepared following standard herbarium techniques (Jain and Rao, 1977) and identified consulting available literatures (Haines, 1924; Kirtikar & Basu, 1935, Goel et.al. 1987).

Results and discussions

The data on medicinal plants used for Gynecological disorders was collected randomly from the local inhabitants in the Santhal, Paragana division (namely Jamtara, Deoghar, Dumka, Pakur, Godda, Sahibganj Districts) and analyzed. A total of 35 ethno-medicinal plants species belonging to 35 genus and 26 angiosperm families have been enumerated in the alphabetical order along with their families classified as per the Bentham and Hooker's (1862-1883) systems of plant classification. Nomenclature update of the specimens is based on the Angiosperm Phylogeny Group Classification III (APG III, 2009) with their botanical names, local

name, parts of the plant used and mode of utilization. The enumeration and utilization of these plants are described below.

Enumeration and utilization of plants

1. *Abrus precatorius* L.

Family with Collection Number – FABACEAE/545

Vernacular Name – Kawet (Sa), Gujjbai, Kakpunu, Kunch

Parts Used – Roots and Seeds.

Ethnomedicinal Uses – For Anti-fertility (Contraceptive), Leucorrhoea and Menstrual disorders

White seeds are soaked overnight in fresh cow's milk and given to patient in the morning, in empty stomach, at the end of menstruation cycle, as a contraceptive. Roots paste is given in menstrual disorders/ leucorrhoea and is also spread over forehead in case of headache (Singh, C.B. 2018).

2. *Abroma augustum* (L.) L.f.

Family with Collection Number – MALVACEAE /237

Vernacular Name - Ulat kambal

Parts Used - Roots and Leaves

Ethnomedicinal Uses: Gonorrhoea and regularization of Menstruation

The infusion of fresh leaves and stems in cold water is effective in cases of gonorrhoea.

The decoction of the plant in empty stomach, 4 to 8 days prior to onset of menstrual period will bring on that painless menstrual flow.

3. *Achyranthes aspera* L.

Family with Collection Number – AMARANTHACEAE /560

Vernacular Name – Cip Cirip (Sa), Kakralatha

Parts Used – Roots

Ethnomedicinal Uses: Easy Delivery

Place the root or the plant on to the vagina holding the breathe and as soon as the child is born it should be removed.

4. *Aloe vera* (L.) Burm.f.

Family with Collection Number – ASPHODELACEAE /243

Vernacular Name – Ghritkumri, Ghikaunwar

Parts Used – Pulp of the leaves

Ethnomedicinal Uses: as a galactogauge

The fresh pulp of the leaves is given to the nursing mother to increase milk secretion.

5. *Alysicarpus vaginalis* (L.) DC.

Family with Collection Number – FABACEAE /702

Vernacular Name – Davai

Parts Used – Roots

Ethnomedicinal Uses: As a Contraceptive

Fresh roots are mixed with the roots of *Tejomala* (*Indigofera linnaei* Ali) in equal amount, made paste and extracted juice is given to the lady in the early morning in empty stomach just after menstruation, to check conception (Singh, C.B. 2018)

6. *Annona reticulata* L.

Family with Collection Number – ANNONACEAE /305

Vernacular Name – Mandargom (Sa), Sitaphal, Sharifa

Parts Used – Seeds

Ethnomedicinal Uses: Inducing abortion

A mixture of the seeds powder along with black pepper (*Piper nigrum* L., about 3gm) is used to induce abortion of 3-4 months of pregnancy.

7. *Asparagus racemosus* Willd.

Family with Collection Number – ASPARAGACEAE /553

Vernacular Name – Kadar nanri (Sa), Satawar, Satamul

Parts Used – Tuberous Roots

Ethnomedicinal Uses: Uterine tonic, regulates menstruation, facilitates easy delivery and as a galactogoue

It strengthens female reproductive organs, regulates menstruation, facilitates easy delivery and increases lactation in nursing women. Half a teaspoonful of the roots paste for about 10-15 days, tones and nourishes female reproductive organs and greatly regulates ovulation. About 2- teaspoonful of the root paste is administered during labour- pain. The dose is repeated every 2 hours. It is also a very good galactagoue. It is also a very good tonic for curing weakness after delivery.

8. *Boerhaavia diffusa* L. *nom.cons.*

Family with Collection Number – NYCTAGINACEAE /549

Vernacular Name – Oh'oc Arak (Sa), Gandhapurna,

Parts Used – Whole plant

Ethnomedicinal Uses: Cures Menorrhagia

10 gm. of plant paste along with rice water (water obtained after washing rice) and a little amount of honey, given twice a day, for about 15 days cures menorrhagia, (excessive discharge of menstruation).

9. *Borassus flabellifer* L.

Family with Collection Number – ARECACEAE /699

Vernacular Name – Tale dare (Sa), Tar

Parts Used – Male inflorescence

Ethnomedicinal Uses: As a Contraceptive

The powder obtained after burning the male inflorescence along with the powder of *gol marich* (*Piper nigrum*) in the fresh cow's milk is administered as a contraceptive for about 3-5 days. Also reported by Satapathy and Dash, (2016), for the Mundas of Jaipur district, of Odisha.

10. *Calotropis gigantea* (L.) Dryand.

Family with Collection Number – APOCYNACEAE /312

Vernacular Name – Akaona, Akwan

Parts Used – Leaves

Ethnomedicinal Uses: Cause labour pain and inducing abortion

The leaves of the plant are used to insert in the cervix of the pregnant women to cause labour pain and induce abortion.

11. *Cardiospermum halicacabum* L.

Family with Collection Number – SAPINDACEAE /294

Vernacular Name – Sim Kundi (Sa), Kanphuti

Parts Used – Leaves

Ethnomedicinal Uses: Expulsion of foetal waste after delivery

The leaves are crushed well, ground and applied over the lower abdomen of the delivered woman. This helps in expulsion of foetal waste of the uterus.

12. *Cyanodon dactylon* (L.) Pers.

Family with Collection Number – POACEAE /551

Vernacular Name – Dubi Ghas (Sa), Salpani

Parts Used – Whole Plant

Ethnomedicinal Uses: Controls Menorrhagia and cures POCS(Poly Cystic Ovarian Syndrome)

The extract of the plant is used in the case of prolonged menstruation durations, along with honey 3-4 times a day. It is also good for urinary tract infections. And also a good herbal remedy for Poly Cystic Ovarian Syndrome.

13. *Desmodium gangeticum* (L.) DC.

Family with Collection Number – FABACEAE /350

Vernacular Name – Toyo candbol(Sa), Salpani, Shalaparni

Parts Used – Roots

Ethnomedicinal Uses: As a Contraceptive

Pills prepared from its roots and roots of *Piper betle* (*Pan*) are given after 45 days of delivery or after 2-4 days of menstruation to make women sterile.

14. *Diospyros montana* Roxb.

Family with Collection Number – EBENACEAE /696

Vernacular Name – Gada terel(Sa), Tamal, Bistendu

Parts Used – Bark

Ethnomedicinal Uses: Profuse diarrhoea after child birth

Grind the bark, warm it and apply it over the abdomen. The raw extract of it is also given to the patient along with the 5 black pepper corns, twice a day

15. *Diplocyclos palmatus* (L.) C. Jeffrey

Family with Collection Number – CUCURBITACEAE /141

Vernacular Name – Kahu Botke(Sa), Shivalingi

Parts Used – Seeds

Ethnomedicinal Uses: Rejuvenate female reproductive organs and regularize menstruation, induce conception

The paste of the seeds is administered for about 3-5 days in early morning in empty stomach

to rejuvenate female reproductive organs, promote and regularize menstruation. The seeds are also taken to prevent miscarriages and induce conception.

16. *Euphorbia hirta* L.

Family with Collection Number – EUPHORBIACEAE /131

Vernacular Name – Pusi toa(Sa), Baradudhi, Barokarni

Parts Used – Whole plant

Ethnomedicinal Uses: As a galactogouge

Grind the entire plant and the extract of the same is given to the patient along with the sugar candy to serve the purpose.

17. *Ficus hispida* L.f.

Family with Collection Number - MORACEAE/697

Vernacular Name – Duma (Sa), Kheksha

Parts Used - Fruits

Ethnomedicinal Uses - As a galactogouge

Boiled green fruits given to mother in diet as a galactogogue for increasing milk secretion in nursing women.

18. *Hemidesmus indicus* (L) R. Br.

Family with Collection Number - APOCYNACEAE /558

Vernacular Name – Analsing, Mota dudhi (Sa), Anantamul

Parts Used - Roots

Ethnomedicinal Uses - Treating leucorrhoea

About 10gm of the root paste is administered continuously for about seven days, in empty stomach in the morning, for the treatment of leucorrhoea.

19. *Hibiscus rosa-sinensis* L.

Family with Collection Number - MALVACEAE /379

Vernacular Name – Joba baha (Sa), Urhul, Jaba

Parts Used – Stem Bark

Ethnomedicinal Uses – Inducing abortion (Behera, 2006 and Satapathy, C.S. and Dash, K. 2016)

Stem bark paste (15 gms) given to pregnant women continuously for five days to induce abortion.

20. *Hygrophila auriculata* Schumach.

Family with Collection Number - ACANTHACEAE /133

Vernacular Name – Kulekhara, Kuila Kadha (Sa)

Parts Used – Leaves, Seeds and Whole Plant

Ethnomedicinal Uses – Cures menorrhagia and regulates menstruation

Extract of the leaves and whole plant is effective in regulating menstrual disorders and menorrhagia. The seeds of the plant relieve inflammation during urine discharge and cures gonorrhoea.

21. *Madhuca longifolia* (J. Koenig) J.F. Macbr.

Family with Collection Number - SAPINDACEAE /626

Vernacular Name – Matkam (Sa), Mahua

Parts Used – Stem Bark

Ethnomedicinal Uses – Expulsion of coagulated blood from uterus (Chandra et al. 1987)

Paste of the stem bark of the plant is used to expel coagulated blood from uterus after delivery.

22. *Melia azedarach* L.

Family with Collection Number - MELIACEAE /701

Vernacular Name – Bokom Baha(Sa)

Parts Used – Leaves

Ethnomedicinal Uses – Continuous fever during pregnancy

The extract of the leaves of the plant along with the molasses refuse is taken luke-warm as tea.

23. *Michelia champaca* (L.) Baill. ex Pierre

Family with Collection Number - MAGNOLIACEAE /340

Vernacular Name - Campa rehet (Sa), Kanakchampa

Parts Used – Roots

Ethnomedicinal Uses – Puerperal fever

Make the extract and then given to the patient along with a bit of Saltpetre (Sora)as tea, the thirst.

24. *Mimosa pudica* L.

Family with Collection Number - FABACEAE /581

Vernacular Name – Kanta Kuca (Sa), Chuimui, Lajjawati

Parts Used – Roots

Ethnomedicinal Uses – As a Contraceptive

Roots (about 5 cm long) is macerated or made to paste and orally taken daily for a weak to cure sexual weakness. Roots of the white flowered variety of the plant along with black pepper (*Piper nigrum* L.) is taken as an oral contraceptive for birth control (Singh, C.B.2018)

25. *Moringa oleifera* Lam.

Family with Collection Number - MORINGACEAE /214

Vernacular Name - Munga chal (Sa), Sahjan, Sojne

Parts Used – Bark

Ethnomedicinal Uses – Retention of urine during parturition and inducing fertility

The paste of the root is given to the patient for normal passage of urine during parturition. The bark is worn round the waist or on the arm, as an amulet to induce fertility.

26. *Mucuna pruriens* (L.) DC.

Family with Collection Number - FABACEAE /575

Vernacular Name - Etkā rehet (Sa), Alkhushi

Parts Used – Roots

Ethnomedicinal Uses – Fever due to pain in lower extremities

The paste made from the roots of the plant along with the roots of *Cryptolepis buchnananii* is given to the patient for about 2-3 days early in the morning to treat fever due to pain in the lower extremities.

27. *Nyctanthes arbor-tristis* L.

Family with Collection Number - OLEACEAE /122

Vernacular Name - Saparum baha(Sa), Shiuli, Harshingar

Parts Used – Stem Bark

Ethnomedicinal Uses – Ash coloured Discharges during pregnancy

The extract made out of roots of *Woodfordia fruticosa* (L.) Kurz (Icak' rehet), Roots of *Embelia tsjeriam-cottam* (Bhabri rehet), bark of *Nyctanthes arbor-tristis* L. (Saparum baha se chal) by boiling all these together. It is then given to the patient to drink this luke warm extract for 5 days early in the morning in empty stomach (Bodding, 1925).

28. *Nymphaea rubra* Roxb. ex Salisb.

Family with Collection Number - NYMPHEACEAE /703

Vernacular Name - Upal baha (Sa), Lal Shaluk, Lalkumudini

Parts Used – Flowers

Ethnomedicinal Uses – Cures Menorrhagia

Nymphaea rubra Roxb. (Upal baha), *Hibiscus-rosa-sinensis* L. (Joba baha), *Erythrina indica* Lam. (Mara baha), *Pterospermum acerifolium* Willd. (Mackunda baha), Roots of *Helianthus annuus* Wild. (Suruji mukhi rehet), Fruits of *Diospyros embryopteris* Pers. (Makarkenda jo) are taken and boiled together till it becomes half let the patient to drink the extract daily till the bleeding ceases.

29. *Ocimum tenuiflorum* L.

Family with Collection Number - LAMIACEAE /111

Vernacular Name – Tursi (Sa), Tulsi

Parts Used – Whole Plant

Ethnomedicinal Uses – Cures general weakness after delivery

Warm decoction of whole plant along with the inflorescences is given to the mother of the new born child, to cure general pain and weakness after delivery.

30. *Phyllanthus fraternus* G.L.Webster

Family with Collection Number - PHYLLANTHACEAE /704

Vernacular Name – Gada Icak' rehet, Patakula

Parts Used – Whole Plant

Ethnomedicinal Uses – Treat gonorrhoea

The extract of the whole plant is used to treat gonorrhoea.

31. *Pterospermum acerifolium* (L.) Willd.

Family with Collection Number - MALVACEAE /376

Vernacular Name – Machkunda (Sa), Muchukunda

Parts Used – Flowers

Ethnomedicinal Uses – Treating leucorrhoea

One pinch of powdered dried flower is given to the patient along with warm, left

over water of boiled parboiled rice to cure leucorrhoea, till 3-5 days, early in the morning.

32. *Peuraria tuberosa* (Roxb.ex Willd.)DC.

Family with Collection Number - FABACEAE /563

Vernacular Name – Tirra da (Sa), Patal konhra

Parts Used – Roots and Tubers

Ethnomedicinal Uses – As a galactogouge

The roots are used as galactogouge. While the tuber rejuvenates the male reproductive system and increases both quality and quantity of sperm count.

33. *Symplocos racemosa* Roxb.

Family with Collection Number - SYMPLOCACEAE /616

Vernacular Name – Ludam (Sa), Lodhra, Lodh

Parts Used – Bark

Ethnomedicinal Uses – Cures menorrhagia

Paste made from the bark of the plant along with the roots of *mota dudhi* (*Hemidesmus indicus* L.) in the ratio of 2:1 and one pinch of it is given to the patient morning and evening in the empty stomach along with honey or jaggary till 3 days.

34. *Vachellia nilotica* (L.) P.J.H.Hurter & Mabb.

Family with Collection Number - FABACEAE /288

Vernacular Name – Babla (Sa), Babul

Parts Used – Bark

Ethnomedicinal Uses – Regulates menstruation

Decoction made from the bark of the plant along with *Bana hata* (*Oroxylon indicum* L.) and *Hesak* (*Ficus religiosa* L.) is given to the patient for 5 days regularly.

35. *Woodfordia fruticosa* (L.) Kurz**Family with Collection Number - LYTHRACEAE /335****Vernacular Name** – Gada Icak' rehet, Patakula**Parts Used** – Flowers**Ethnomedicinal Uses** – Treatment of leucorrhoea

About 3-4 gm of dried flower powder with honey is given to the patient once a day for the treatment of leucorrhoea. Same treatment is also reported by Behera (2006) for the tribals of Mayurbhanj District, Orissa.

On the basis of the ethnobotanical fieldwork undertaken it has been revealed that these Indigenous and tribal communities uses these available ethnomedicines for a total of 14 different types of gynaecological disorders like menstrual disorders like menorrhagia, leucorrhoea, gonorrhoea, menstrual cramps, fever due to pain in lower extremities, inducing fertility, as a contraceptive, as a galactogogue, uterine tonic, inducing abortion, pregnancy related complexities, smooth delivery, after birth problems like fevers, diarrhoea, etc.

Out of the total 35 ethno-medicinal plants enumerated, family Fabaceae (7) ranks highest in terms of utilization, followed by the Malvaceae (3), followed by Sapindaceae (2) and followed by the rest others. Of the various ethnomedicine used tree species are utilized most (12), followed by herbs (11), followed by shrubs (6), followed by under- shrub and climbers & twiners (3 each). Of the ethnomedicines used, roots of the plants are used most (12), followed by bark (7), followed by whole plant (6), then leaves (5), then flowers and seeds (3 each) and then fruit & inflorescence (1).

These people prefer these local medicinal practitioners than the doctors available in the towns, as they are locally available, the ethnomedicines administered by them can be easily found in their nearby surroundings or in local weekly markets and are comparatively cheaper than the allopathy medicines.

This traditional knowledge is dwindling with these communities due to gradual modernization, imbalance between demand and supply of basic needs, extinction of valuable, wild and domestic varieties of plant resources due to deforestation etc. The rich phyto- diversity of this region also provide future scope for further explorations, experimentations and researches of various economically important

plant species along with their vital medicinal prospects, which are being utilized by these people to meet their health and nutritional requirements.

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