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Research Article

Dietary Use of Ethno Gynaecological Plants by Tribal Women of *Melghat*

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Abstract: The tribal people are indigenous people who depend on the forests and the traditional healers for their day-to-day and medicinal needs. *Melghat* is a tribal belt of Maharashtra where more than 80% population belongs to different tribes. The objective of the present investigation was to study the dietary use of ethno gynaecological plants and confirm their medicinal properties from traditional medicinal systems of Ayurveda viz., *Indian Pharmacopeia* and *Dravyagunvidnyan*. For the investigation, eight villages located on the boundary of *Melghat* Tiger Reserve were selected. The local medical practitioner's viz., *Bhagat*, *Bhumkas* and *Daais*, of seven different tribes were interviewed. The medicinal properties of ethno medicinal plants were studied under four categories viz., menstrual problems like *menorrhagia*, *hypo-menorrhea*, *leucorrhoea*, *menorrhea*, *Amenorrhea* and menstrual pain; contraception, abortion and delivery; fertility and pregnancy; post pregnancy and lactation. About 29 medicinal plants were found to be used by tribal as ethno gynaecological medicines. The study revealed the resemblance between the traditional nutrition knowledge and Ayurveda database. Documentation of this knowledge may have significant importance to explore further concepts of ethno gynaecology and dietary studies.

Keywords: Ethno-gynaecology, *Melghat*, *Bhagat*, *Daai*, *Dravyagunvidnyan*

INTRODUCTION

Gynaecological health care can be described as the care of the woman from her reproductive age, pre pregnancy stage, during pregnancy and post pregnancy stages¹. Proper care of woman in all these stages is highly important to overcome the issues of maternal and child mortality. In our country, the traditional system of medicine plays an important role in health care of rural people for all types of ailments². Traditional healers of these areas incorporate many medicinal plants in food system to treat the disorders. Tribal population mostly depend on the traditional methods of medications, as they are pretested, easy and effective. Traditional healers can be found in most of the societies. In *Melghat*, *Bhagats* and *Bhumkas* are the traditional medicinal practitioners who are following these practices since long time.

Melghat is the tribal belt lies between the forests of Maharashtra and Madhya Pradesh. *Melghat* comes under tribal sub plan area. Entire area comes under category I. i.e. where tribal population is over 50%. Tribal sub-plan area extends over an area of 4212 sq.km out of which 77% area is under forest. There are 314 villages having about 80% population of tribal. *Melghat* region is a rich heritage of forests and a storehouse of many nutritional and medicinal plants. The tribal population of *Melghat* depends on the forests and the traditional healers for their medicinal needs³.

Msiska *et al.*⁴ reports the reasons of this dependency as lack of availability of medical services and hesitation to consult their problems with non-familiar doctors, especially in cases of gynaecological disorders. Hence, the ethno gynaecological knowledge of the traditional healers gets immense importance especially in tribal areas. Ethno-gynaecology can be considered as the indigenous approach to deal with female reproductive health. The techniques of incorporating medicinal plants to treat gynaecological problems such as abortion, menstrual pain, menopause, morning sickness, leucorrhoea, infertility, delivery problems, are the main constraints of ethno gynaecology⁵. Ogbé⁶ states that the large proportion of Nigerians in the rural areas at some stage in their life turn to traditional or ethno-medicinal and alternative health care systems due to the accessibility, availability, affordability and inherent trust in this method. This observation agrees with the general estimate that 85% of the population in developing countries depend mainly on traditional health care systems. Considering the importance of ethno gynaecological knowledge of tribal population, the present study is made to document the dietary use of entho gynaecological plants used by tribal women of *Melghat*. The objective of the present investigation was to study the dietary use of ethno gynaecological plants and confirm their medicinal properties from traditional medicinal systems of Ayurveda viz., *Indian Pharmacopeia* and *Dravyagunvidnyan*.

METHODOLOGY

The area selected for the survey is the area just adjacent to the MTR Project, where the residents are far away from the modernized world and follow their own pattern of living. The tribal people residing these villages depend mostly on forests. They have different traditions and customs based on forests. The use of forest and non-timbers products is the main source of their livings. They have specific knowledge about the forest weeds, plants and trees, which they use in their daily life, which include medical ailments and gynaecological issues too. To get this gynaecological knowledge documented, villages, which come in, or nearby wild life, areas are selected for the survey. Data was collected by questionnaire cum interview method. Interviews of old women, *daai* (a woman who helps in child birth) and *bhumkas* (person who practices with folklore medicine) were conducted to know the gynaecological importance of the plants. The medicinal plants identified by local people were confirmed from 30 local medicinal practioners (14 *Daaais*, 16 *Bhumkas*). The conditions such as *menorrohea*, *Amnerrohea*, *oligomenorrhea*, *leucorrhea*, abortions, healthy pregnancy and post pregnancy are considered. The gynaecological importance of the plants reported by tribal women were confirmed from *Ayurvedic Pharmacopea* and *Dravyagunvidnyan Vol II*. Nutritive

importance of the ethnogynecological plants were found from available literature. The dietary use of the ethnogynaecological plants was noted. Special suggestions with reference to gynological conditions while using the plant as food was also reported. The study was designed in four heads of gynaecological conditions viz 1) Medicinal plants used for problems related with menstrual cycle, 2) Medicinal plants used for the conditions of contraception, abortion and easy delivery 3) Medicinal plants used for fertility and healthy pregnancy 4) Medicinal plants used for post pregnancy period 5) Dietary use of medicinal plant in day to day life of tribal women of *Melghat*.

RESULTS AND DISCUSSION

In the present study the effort have been made to document the gynaecological knowledge of tribal women of *Melghat*. It was observed that tribal women have good knowledge of gynocological situations and they use the wild plants for the treatment of the same.

Plants used for problems related to menstrual cycle: Tribal women use gynocological problems plants for various problems such as heavy bleeding (*Menorrhagia*), scanty bleeding or spotting (*Hypomenorrhoea*), accidental stopping of menstrual flow for short or long time in productive age women (*amenorrhoea*), irregular menses (*oligorrhoea*), painful menses (*Dismenorrhoea*) and white discharge before or after menses (*leucorrhoea*). In the following table, 13 ethnogynaecological plants are listed which are used for the problems related to menstrual cycle. Consumption method of the plant, local belief and its confirmation is also listed.

Plants used for the conditions of contraception, abortion and delivery: Contraception, abortion and easy delivery are the stages, which either prevent, stop forcefully or provides childbirth. Tribal women of *Melghat* have various medicinal plants, which used in these conditions. The use of plant for particular condition gives different result. Plants that have contraceptive and abortifacient properties may act through rapid expulsion of the fertilized ova from the fallopian tube, inhibition of implantation due to a disturbance in estrogen- progesterone balance, foetal abortion, perhaps due to lack of supply of nutrients to the uterus and the embryo, causing mortality⁷.

Present study also enlists some plants, which show abortive, contraceptive qualities and support for easy delivery. **Table 2** describes the list of medicinal plants, which used for the conditions such as contraceptives, abortion and easy delivery.

Medicinal plants used for fertility and healthy pregnancy: Tribal women, *daai*, *Bhagats* and *bhumkas* revealed important medicinal plants which supports fertility and strengthens the uterus. The medicinal plants used for fertility and healthy pregnancy are been presented in **Table 3**.

Plants used for post pregnancy period: Medicinal plants have a significant role during pregnancy, birth and postpartum care in many rural areas of the world. Plants used in women's health related issues such as pregnancy, birth (parturition), postpartum (puerperium) and lactation, including infant care, have documented for various ethnic groups. Boer and lamaxy⁷ present study enlists medicinal plants, which increase the milk secretion (*stanyaja*) and increase the quality of milk (*stanyasangrahaniya*). Table 4 shows the list of galactogogues used by tribal women of *Melghat*. These medicinal plants also have benefits of increasing immunity and providing better health after delivery.

Table 1: Medicinal plants used for problems related to menstrual cycle

Sr. no	Local name	Identified by		Botanical Name	Mode of consumption	Local belief	Confirmation from Ayurveda
		Bhagat	Daai				
1	Gulmohar	8	10	<i>Delonix regia</i>	Flowers are boiled in water and given. Chutney is also made from these flowers	suppress menstrual pain	Helps in painful menstruation (<i>peedanashaka</i>)
2	Bramhi	11	10	<i>Centella asiatica</i>	Roots are boiled in water and given	Reduces menstrual pain	menstrual disorders
3	Savali	8	12	<i>Bombax ceiba</i>	Dried flowers tea is given	Helps in vaginal discharge	Useful in vaginal infection
4	Katemath	10	12	<i>Amaranthus spinosus</i>	leaves are eaten, either paste or in <i>subji</i> form	Helps in white discharge	Useful in vaginal infection
5	Wora/Wad	6	10	<i>Ficus benghalensis</i>	Tender fruits are boiled in water and eaten. The water is also consumed	Helps in vaginal burning due to discharge	Useful in vaginal infection, cures vaginal irritation
6	Chilati	10	13	<i>Mimosa hamata</i>	Take leaf juice with one cup of water twice a day for leucoria	controls vaginal discharge	used in urino- vaginal infections
7	Khobewel	10	9	<i>Hemidesmus indicus</i>	roots are boiled in water and given	keeps vaginal passage soft and warm	urino-genital diseases
8	Tati Zara	10	10	<i>Cynodon dactylon</i>	whole plant juice is given	controls heavy menstrual flow, the supports in conception	used in pre pregnancy stages for strengthening uterus
9	Maka	11	10	<i>Eclipta Prostrata</i>	leaves powder is taken with a cup of water once a day	controls heavy menstrual flow	Menorrhagia
10	Kena	10	8	<i>Commelina benghalensis</i>	Juice of leaves is given twice a day	controls heavy menstrual flow, reduces pain	Menorrhagia
11	Khaparkhuti	12	14	<i>Boehrvia diffusa</i>	leaves are consumed	controls white discharge	infections of vaginal tract
12	Tetu	11	13	<i>Oroxylum indicum</i>	powered of dried flowers, fresh flower paste	controls heavy bleeding	Menorrhagia
13	Palash	12	10	<i>Monosperma Butea</i>	flower/seed/root/bark boiled in water and given	vaginal infections	Leucorrhoea

Table 2: Medicnal plants used as contraceptives, abortive and for easy delivery.

Sr. no	Local name	Identified by		Botanical Name	Mode of consumption	Local belief	Confirmation from Ayurveda
		Bhagat	Daai				
1	Tadwa	7	11	<i>Ficus hispida</i>	Fruits are boiled with milk and given	secrets milk	increase the milk secretion (<i>stanyaja</i>)
2	Anantmul	15	14	<i>Hemidesmus indicus</i>	Roots are given with milk	secrets milk	increase the milk secretion (<i>stanyaja</i>)
3	Satawar/Shatawari	12	14	<i>Asparagus racemosa</i>	Root powered is given with hot milk	increases milk secretion	increases milk quality (<i>stanyasangrahaniya</i>)
4	Ashwagndha	15	14	<i>Withania somnifera</i>	Root powered is given with hot milk	increases milk secretion	increases milk quality (<i>stanyasangrahaniya</i>)
5	Kukus	8	6	<i>Costus Speciosus</i>	Rhizome is boiled in milk	Milk production	increase the milk secretion (<i>stanyaja</i>) and general health after delivery, gives strength, increases immunity
6	Babhali	12	14	<i>Acasia nilotica</i>	Laddoos are made from gum	Milk production	Increase the milk secretion (<i>stanyaja</i>) and general health after delivery, gives strength, increases immunity

Table 3 : Medicinal plants used for fertility and healthy pregnancy.

Sr. no	Local name	Identified by		Botanical Name	Mode of consumption	Local belief	Confirmation from Ayurveda
		Bhagat	Daai				
1	<i>Baasha</i>	10	12	<i>Bambusa arundinace</i>	decoction whole plant	Helps fertility	produces egg (<i>aarttavajanan</i>), used for oligo menorrhea, amenorrhea and hypo menorrhea
2	<i>San, Boru</i>	7	10	<i>Crotalaria Juncea</i>	leaves tea and seeds tea is given	Leaves tea increases iron, seeds tea helps in fertility	Used in anemia and produces egg (<i>aarttavajanan</i>), used for oligo menorrhea, amenorrhea and hypo menorrhea
3	<i>Tati Zara</i>	7	9	<i>Cynodon Dactylon</i>	juice of plant is given with ghee	it helps fertility	Supports fertility (<i>Prajasthapan</i>)
4	<i>Shingoda</i>	8	11	<i>Trapa natans</i>	roasted seeds are given with milk	strengthen uterus	Supports fertility (<i>Prajasthapan</i>)
5	<i>Kuwalo</i>	8	6	<i>Clorophytum borivilianum</i>	Root powder is boiled in Milk	Strengthens Uterus	Aphrodisiac
6	<i>Ambushi</i>	13	11	<i>Oxalis corniculata</i>	Juice of leaves is given	Helps to enhance fertility	Supports fertility.

Table 4 : Medicinal plants used for post pregnancy period

Sr. no	Local name	Identified by		Botanical Name	Mode of consumption	Local belief	Confirmation from Ayurveda
		Bhagat	Daai				
1	<i>Tadwa</i>	7	11	<i>Ficus hispida</i>	Fruits are boiled with milk and given	secrets milk	increase the milk secretion (<i>stanyaja</i>)
2	<i>Anantmul</i>	15	14	<i>Hemidesmus indicus</i>	Roots are given with milk	secrets milk	increase the milk secretion (<i>stanyaja</i>)
3	<i>Satawar/Shatawari</i>	12	14	<i>Asparagus racemosa</i>	Root powered is given with hot milk	increases milk secretion	increases milk quality (<i>stanyasangrahaniya</i>)
4	<i>Ashwagndha</i>	15	14	<i>Withania somnifera</i>	Root powered is given with hot milk	increases milk secretion	increases milk quality (<i>stanyasangrahaniya</i>)
5	<i>Kukus</i>			<i>Costus Speciosus</i>	Rhizome is boiled in milk	Milk production	increase the milk secretion (<i>stanyaja</i>) and general health after delivery, gives strength, increases immunity
6	<i>Babhali</i>	12	14	<i>Acasia nilotica</i>	<i>Laddoos</i> are made from gum	Milk production	increase the milk secretion (<i>stanyaja</i>) and general health after delivery, gives strength, increases immunity
7	<i>Kartule</i>			<i>Momordica dioica</i>	<i>Sabji</i> is made from green tiny fruits.	Milk production	increase the milk secretion (<i>stanyaja</i>) and general health after delivery, gives strength, increases immunity, decreases breast pain

Dietary use of medicinal plant in day to day life of tribal women of Melghat: Ethnogaecological plants used in the *Melghat* region not only have medicinal importance but it is also used in the day to life of the tribal population. Many of the medicinal plants are used as food by the tribal group. Efforts have been made to find out the dietary use of these enthnomedicinal plants.

The survey was conducted to find out the common recipes of tribal people of *Melghat*. Tribal people use these recipes to consume ethnogaecological plants too. In the present study, total 29 ethnogaecological plants were found, out of which 19 plants are used by the tribals as their regular food. **Table 5** enlists the recipes of ethnogaecological plaants used by tribal women of *Melghat*.

Table 5: Ethnogaecological plants and their recipes used in day to day life.

Sr. no	Local Name	Name of the recipe
1	<i>Gunji</i>	<i>Sukhi bhaji, pithachi bhaji</i>
2	<i>Papita</i>	Eaten raw
3	<i>chitrak</i>	<i>Sukhi bhaji, pithachi bhaji dal bhaji, Bhakri</i>
4	<i>Gulmohar</i>	<i>Sukhi bhaji</i>
5	<i>Bramhi</i>	<i>pithachi bhaji</i>
6	<i>Savali</i>	<i>Sukhi bhaji, gili chutney</i>
7	<i>Katemath</i>	<i>Sukhi bhaji</i>
8	Wora/Wad	<i>Achar</i>
9	chilati	<i>Sukhi bhaji, muthe, pithachi bhaji</i>
10	<i>Khobewel</i>	Tea
11	<i>Kena</i>	<i>Pakode, Dal bhaji</i>
12	<i>Khaparkhuti</i>	<i>Sukhi bhaji, pithachi bhaji dal bhaji, Bhakri</i>
13	<i>Tetu</i>	<i>Sukhi bhaji</i>
14	<i>Palash</i>	<i>Sukhi bhaji, sarbat, bhakri</i>
15	<i>Baasha</i>	<i>Ubli bhaji</i>
16	<i>San, Boru</i>	<i>Sukhi bhaji</i>
17	<i>Shingoda</i>	<i>bhakri</i>
18	<i>Anantmul</i>	Tea
19	<i>Kukus</i>	Tea

CONCLUSION

Melghat is the storehouse of ethnogaecological knowledge. Tribal women of *Melghat* are using this knowledge since time immortal. In the present study 29 ethnogaecological plants are reported. The medicinal importance of the plants were confirmed. Out of 29 plants, 19 plants are consumed regularly as food. This supports the dietary importance of the ethnogaecological plants. The ethnogaecological and nutritional knowledge of the tribal women of *Melghat* is interlinked, supportive to each other and is based on the traditional medicinal systems of Ayurveda. Documentation

of this knowledge may have significant importance to explore further concepts of ethnogynecological and dietary studies.

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