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Herbal Remedies for Female Sportsperson

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Abstract:

India is blessed with huge biological diversity from East to West and North to South. Plants are crucial for human survival and play a great role in our day to day life. Most of the plants have a medicinal property in them which is used to cure various diseases and disorders in our body. From ancient time various plants have been described by scholars for their medicinal use. Ayurveda and Ethnopharmacological studies have shown that there are various plants which are used to cure and care the menstrual related problems.

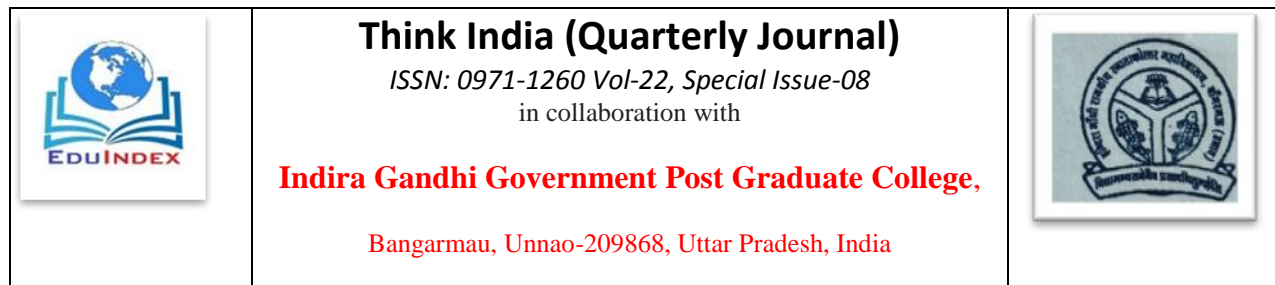
Women are doing well in sports at present in India. Female sportsperson go through several healths related problems which must be resolved to increase their efficiency and confidence. Menstrual related problem are one of the less discussed health problem. The present paper discusses some of the herbal remedies for menstrual related disorders. Menstrual-related problems have not been given proper attention all over the world. Sometimes menstrual related problems are dangerous in various ways. Some of the common menstrual disorders are menorrhagia, amenorrhoea, hypomenorrhoea, oligomenorrhoea, dysmenorrhoea, etc. It is found that several plants and their products have been found to play a very significant role in controlling these disorders. Adhatodavasica, Aeglemarmelos, Ficushispida, Sesamumindicum, Phyllanthusamarus, Strobilanthes ciliates and many more plants are used in curing such problems.

Keywords: Menstrual Cycle, Sanitary Facilities, Dysmenorrhea.

Introduction

Menstruation is a normal physiological process where the periodic flow of blood occurs from the (Nations, 2012) lining of the uterus in human females and other primates (Harlow and Campbell, 2000). However, this biological process never gets attention from a certain global organization and is neglected as a topic of taboo. Women undergoing menstrual cycle suffer horrendous ignorance from people in society. Due to lack of proper sanitation facilities and analgesics, complications and certain diseases related to reproduction increase at an alarming rate causing mortality of women of reproductive age worldwide(Harlow and Campbell, 2000, 2004; Rajith NP et al, 2012; Tinde van Andel et al, 2014).

Due to lack of access to proper medication and sanitary facilities, menstrual disorders are one of the leading factors in the death of women herself and her foetus. Severe menstrual disorders arise due to ignorance such as excessive bleeding may cause fatal disorders whereas irregular shedding of the uterine wall may be a symptom of the cervical tumour (Harlow and Campbell, 2000; Tinde van Andel et al, 2014). Cancer of the uterus is very common where either the uterus is removed from the body through surgical methods from the body of diseased woman or she die ultimately due to lack of medicine and



sanitation. Generally, a large number of women belonging to rural proportions are highly susceptible towards acquiring menstrual or reproductive disorders because sanitation and access to proper prescriptions are either unavailable or are unaffordable to these women in contrast to women in western countries or rich households. More than 2000 plant species are used for curing menstrual disorders. The most salient uses are to treat pain during menstruation, to induce or regulate the menses and to induce abortion. Out of so many species of the plants which could be a miracle to women health, only a few species have been researched and brought into use and rest of the species are left untouched again due to the same reason, “*why to defend the taboo?*”(Tinde Van Andel, 2014)

Plants which are left are especially those plants which induce abortion, as for a long time it was considered as an illegal and immoral objective for a very long time (Schiebinger, 2004). It is essential to know more about pharmacological properties, possible benefits and adverse effects of the traditional remedies before they can be safely and appropriately integrated into conventional medicine. (Farnsworth 1990; Tinde van Andel, 2014; Rajith N P et al, 2012)

MENSTRUAL CYCLE

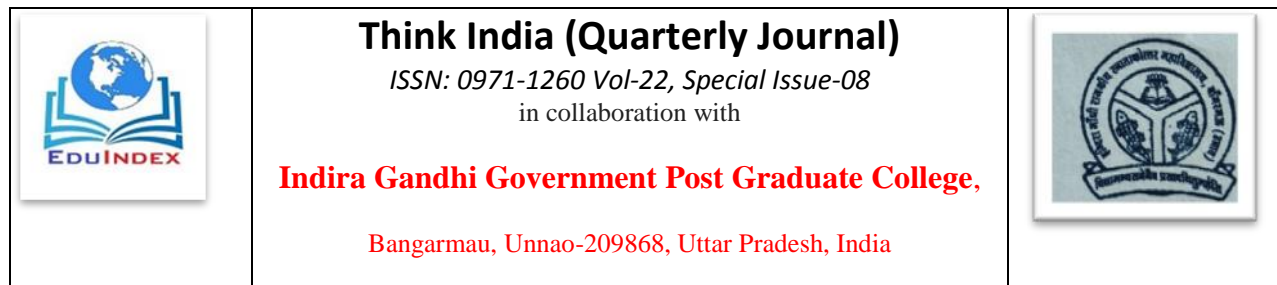
The rhythmic series of changes that occurs in the reproductive organs of the female primates (monkeys, apes and human beings) is called the menstrual cycle, and this cycle is repeated at an average interval of about 28/29 days. The menstrual cycle is one of the most important cycles occurring within the body of females which mark the beginning of a healthy reproductive life of woman, i.e. this shows that she is now potent and able to conceive (Rajith NP et al, 2012).

Some women get through their monthly menstrual cycles easily with few or no concerns. They do have regular cycles every month causing a little more than a minor inconvenience. However, other women experience a host of physical and/or emotional symptoms just before and during menstruation. From heavy bleeding and missed periods to unmanageable mood swings, these symptoms may disrupt a woman’s life in major ways (Rajith NP et al, 2012).

Human menstrual cycle is divided in four phases: menstrual phase’ begins with 1st day of menstrual bleeding and lasts for 5 days. Follicular phase, from day one to day 13, Ovulation phase, day 14 on which ovule is released due to hormonal action. Luteal phase begins on day 15 and lasts up to beginning of next menstrual bleeding (Teepker M. et al, 2010; Monawara Begum et al, 2016).

The soft tissue of the endometrial lining of the uterus disintegrates causing bleeding. With each menstrual cycle, the endometrium (uterine lining) prepares itself to nourish the fetus. If fertilization does not occur and the released egg remains unfertilized then the developed endometrial lining disintegrates itself and the soft tissues are discharged. These discharged tissues come out of vagina along with for 3-5 days. In some cases, irregularity can occur in this cycle indicating menstrual disorders (Rajith NP et al, 2012).

During the follicular phase or the proliferative phase, the primary follicles in the ovary grow and become a fully mature Graafian follicle. The endometrium of the uterus is regenerated due to the secretion of luteinizing hormone (LH) and follicle stimulating hormone (FSH) from the anterior pituitary and the ovarian hormone, estrogens. This phase lasts about 10-14 days (Monawara Begum et al, 2016). During the ovulatory phase, rapid secretion of LH (LH Surge) induces rupture of Graafian follicle, thereby leading to ovulation (release of ovum) and this phase lasts for 48 hours (Monawara Begum et al, 2016).



During Luteal or secretory phase, the ruptured follicle changes into corpus luteum in the ovary and it begins to secrete progesterone. The endometrium thickens further and their glands secrete a fluid into the uterus. If the ovum is not fertilized, the corpus luteum undergoes degeneration and this causes disintegration of the endometrium leading to menstruation. Estrogens and progesterone rise during this phase and this phase lasts only for one day (Monawara Begum et al, 2016).

Menstrual Disorders

Premenstrual syndrome (PMS)

PMS is a term commonly used to describe a wide variety of physical and psychological symptoms associated with the menstrual cycle. It is any unpleasant or uncomfortable symptom during the menstrual cycle that may temporarily disturb the normal functioning. These symptoms may last from a few hours to many days and the types and intensity of the symptoms can vary in individuals.

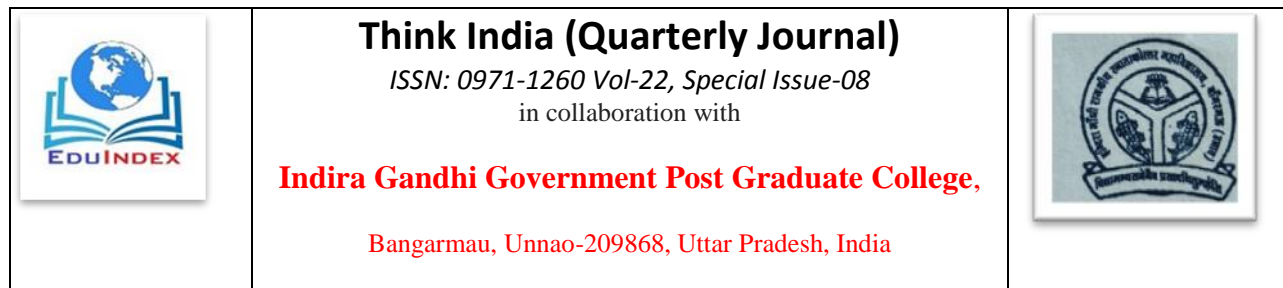
Premenstrual Dysphoric Disorder (PMDD) is a much more dangerous form of PMS. It requires treatment by a physician. Although each individual may experience symptoms differently, the most common symptoms of PMS can include any of the following:

- Psychological symptoms (depression, anxiety, irritability)
- Gastrointestinal symptoms (bloating)
- Fluid retention (swelling of fingers, ankles, and feet)
- Skin problems (acne)
- Headache
- Vertigo
- Fainting
- Muscle spasms
- Heart palpitations
- Allergies
- Infections
- Vision problems
- Eye infections
- Decreased coordination
- Diminished libido (sex drive)
- Changes in appetite
- Hot flashes

Amenorrhea

Amenorrhea is categorized by absent menstrual periods for more than three monthly menstrual cycles. The absence of menstrual cycles is normal before puberty, after menopause and, during pregnancy. If one is not having monthly menstrual discharge and don't fit any of the above-mentioned categories, then she must consult a health care professional. There are two kinds of amenorrhea: primary and secondary

- **Primary amenorrhea** is diagnosed if one turns 16 and hasn't menstruated. It's usually caused by some problem in your endocrine system, which regulates woman's hormones. Sometimes these results from low body weight associated with eating disorders, excessive exercise or medications. This medical condition can be caused by a number of other things, such as a problem with her ovaries or an area of her brain called the hypothalamus or genetic abnormalities. Delayed maturing of your pituitary gland is the most common reason, but one should be checked for any other possible reasons (Monawara Begum et al, 2016).



- **Secondary amenorrhea**, patient had regular periods, but they suddenly stop for three months or longer. It may affect estrogen levels, including stress, weight loss, exercise or illness (Monawara Begum et al, 2016).

Dysmenorrhea

It is characterized by severe and frequent menstrual cramps and pain associated with menstruation. The cause of dysmenorrhea is dependent on if the condition is primary or secondary. With primary dysmenorrhea, women experience abnormal uterine contractions resulting from a chemical imbalance in the body. Endometriosis and some other medical conditions are also responsible for secondary dysmenorrhea (Monawara Begum et al, 2016). Other possible causes may include:

- pelvic inflammatory disease (PID)
- uterine fibroids
- abnormal pregnancy (i.e., miscarriage, ectopic)
- infection, tumours, or polyps in the pelvic cavity

Any woman can develop dysmenorrhea, but those who are at increased risk include:

- Smokers
- Those who consume excessive alcohol during their period
- Women who are overweight
- Women who started menstruating before the age of 11

Dysmenorrhea Symptoms

The most common symptoms may include:

- Cramping or pain in the lower abdomen
- Low back pain or pain radiating down the legs
- Nausea
- Vomiting
- Diarrhoea
- Fatigue
- Weakness
- Fainting
- Headaches

Menorrhagia



Menorrhagia is the most common type of abnormal uterine bleeding and is characterized by heavy and prolonged menstrual bleeding. In many cases, bleeding may be so severe that daily routine get disrupted (Monawara Begum et al, 2016). In other condition, which is also called dysfunctional uterine bleeding, symptoms may include:

- Polymenorrhea: menstruation is too frequent.
- Oligomenorrhea: Infrequent or light menstrual cycles
- Metrorrhagia: Any irregular, non-menstrual bleeding, ie bleeding between menstrual periods
- Postmenopausal bleeding: Any bleeding that occurs for more than one year after menopause.

Menorrhagia Causes

There are several possible causes of menorrhagia, including:

- Hormonal imbalance
- Pelvic inflammatory disease (PID)
- Uterine fibroids
- Abnormal pregnancy; i.e., miscarriage, ectopic (tubal pregnancy)

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- Infection, tumours or polyps in the pelvic cavity
- Certain birth control devices; i.e., intrauterine devices (IUDs)
- Bleeding or platelet disorders
- High levels of prostaglandins
- High levels of endothelins
- Liver, kidney or thyroid disease

Menorrhagia Symptoms

Typical symptoms of menorrhagia is heavy bleeding and a woman has soaked their enough sanitary napkins or tampons to require changing every hour, and/or a woman’s menstrual period lasts longer than 7 days in duration. Other common symptoms include spotting or bleeding between menstrual periods, or spotting or bleeding during pregnancy.

Treatment: Where Herbs Act

Causes of menstrual disorders are Tumours, smoking, depression, chemotherapy, endometriosis, liver disease, hypothyroidism, kidney disease, polycyclic ovary syndrome (PCOS). If not treated properly, these disorders anaemia, infertility, and osteoporosis, etc.

Plants are one of the best gift of nature to the mankind. They not only provide oxygen and food to us but also provide a lot of medicinal products. These medicinal products of plants are used to cure various diseases and disorders from ancient time. Ayurveda and Unani system of medicine are totally dependent on plant and their food products. Various plants and their products are still used to cure various menstrual related problems in India mostly by villagers and tribals. Some of the plants used in controlling various menstrual related disorders are listed in the table 1.

Conclusions

India is a growing economy and still a developing country and many of the changes are still needed to make our country a superpower and to ensure a healthy livelihood to the population living here. One of the major things that are neglected regarding the health of women is menstrual disorders. It is now such a serious issue of taboo that one may not even want to talk about it and taking some meaningful measures is something out of blues for them. A collective effort is needed to get these disorders out of the taboo list created by society. In addition to this, there are certain misconceptions regarding these problems even among women that they themselves decide not to do anything about it. Ignorance does no good. There are certain herbs present which help to cure these problems without any of the side effects. A little awareness can make a big change. A little is done, a little is needed to be done.

Si. No	Scientific Name	Family	Parts used	Disorder	Preparation	Application
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Table 1: Some of the plants used to cure menstrual cycle disorders



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1	<i>Artemisia absinthium</i> L.	Compositae	Leaf	Fever, vaginitis	Decoction	Oral
2	<i>Matriacachamomilla</i> L.	Compositae	Leaf, Flower	Menstrual pain	Infusion	Oral
3	<i>Tagetusalucida</i> Cav.	Compositae	Leaf, Flower	Menstrual pain	Infusion	Oral
4	<i>Bryophyllumpinnatum</i> Kur z.	Crassulaceae	Leaf	Menstrual pain	Decoction	Oral
5	<i>Acalyphaarvensis</i> Poepp. &Endl.	Euphorbiacea e	Leaf	Menstrual pain, Vaginitis	Decoction	Oral
6	<i>Juglans</i> sp.	Juglandaceae	Leaf	Vaginitis	Decoction	Washing
7	<i>Rosmarinusofficinalis</i> L.	Labiatae	Leaf, Stem	Menstrual pain	Decoction	Oral
8	<i>BrysonimaCrassifolia</i> Hex .	Malpighiacea e	Bark, Leaf	Vaginitis	Decoction	Washing
9	<i>Gossypiumhirsutum</i> L.	Malvaceae	Root	Vaginitis	Decoction	Washing
10	<i>Sidarhombifolia</i> L.	Malvaceae	Leaf, Stem	Urinary inflammation	Decoction	Oral
11	<i>Cocas nucifera</i> L.	Palme	Fruit	Urinary infection	Liquid	Oral
12	<i>Piper auritum</i> HBK.	Piperaceae	Leaf	Ovarian Pain	Decoction	Oral
13	<i>Solanumnigrescens</i> Mart. & Gal.	Solanaceae	Leaf	Vaginitis	Decoction	Washing
14	<i>Coriandrumsativum</i> L.	Umbelliferae	seed	Urinary infection	Decoction	Oral
Menorrhagia						
15	<i>Adhatodavasica</i> Nees.	Acanthaceae	Leaves	Menorrhagia	Leaf juice teaspoon with jaggery	Oral



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16	<i>Aeglemarmelos</i> L.	Rutaceae	Leaves	Menorrhagia	Leaf paste with warm water	Oral
17	<i>Asparagus racemosus</i> Willd.	Liliaceae	Tuberous root	Menorrhagia	4 teaspoon expressed juice with sugar	Oral
18	<i>Mimosa pudica</i> L.	Mimosaceae	Tender Leaves	Menorrhagia	Leaf paste with curd	Oral
19	<i>Zizipusrugosa</i> Lam.	Rhamnaceae	Leaves	Menorrhagia	Grind with lemon juice as tablet	Oral
20	<i>Phyllanthusamarus</i> , Schum. &Thonn.	Euphorbiaceae	Whole plant	Menorrhagia	Paste with buttermilk	Oral
21	<i>Micheliachampaka</i> L.	Magnoliaceae	Root Bark	Menorrhagia	Fresh root bark paste	Oral
22	<i>Ficushispida</i> (L.) f.	Moraceae	Latex	Menorrhagia	5 drops of latex with honey	Oral
23	<i>Desmodiumtriflorum</i> L.	Fabaceae	Whole plant	Menorrhagia	Juice mixed with honey	Oral
Amenorrhoea						
24	<i>Carica papaya</i> L.	Caricaceae	Fruit	Amenorrhoea	Unripe fruits	Oral
25	<i>Cynodondactylon</i> (L.) Pers.	Poaceae	Whole plant	Amenorrhoea	Fresh plant parts ground and mixed with rice soup	Oral
26	<i>Tamarindusindica</i> L.	Caesalpiniaceae	Root bark	Amenorrhoea	Root bark rubbed in cow milk	Oral
Hypomenorrhoea						
27	<i>Aloe vera</i> (L.)Burm. f.	Liliaceae	Leaves	Hypomenorrhoea	Leaves crushed mixed with equal amount of honey	Oral



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28	<i>Phyllanthusemblica</i> L.	Euphorbiaceae	fruit	Hypomenorrhoea	Fruits crushed juice mixed with honey	Oral
29	<i>Sesamumindicum</i> L.	Pedaliaceae	Seed	Hypomenorrhoea	Seed powder mixed with jaggery	Oral
30	<i>Sesamumindicum</i> L.	Pedaliaceae	Seed	Hypomenorrhoea	Seed powder mixed with egg white	Oral
Oligomenorrhoea						
31	<i>Aloe vera</i> (L.)Burm. f.	Liliaceae	Leaves	Oligomenorrhoea	Expressed juice with garlic melted jaggery, boiled	Oral
32	<i>Prunuspersica</i> (L.) Batsch	Rosaceae	Seed	Oligomenorrhoea	6-8 almonds mixed with half spoon sesamum seed, 1cup milk, egg yolk, and honey	Oral
33	<i>Azadirachtaindica</i> A. Juss.	Meliaceae	Leaves	Oligomenorrhoea	Fresh leaves are ground with jaggery	Oral
34	<i>Bacopamonneri</i> (L.)Penne ll.	Scrophulariaceae	Whole plant	Oligomenorrhoea	Juice is taken with cow milk	Oral
35	<i>Cissusquadrangularis</i> L.	Vitaceae	Stem	Oligomenorrhoea	Expressed juice is mixed with honey	Oral
36	<i>Withaniasomnifera</i> (L.)Dunal.	Solanaceae	Seed	Oligomenorrhoea	Seeds are pounded and boiled with rice	Oral
37	<i>Sarakaasoca</i> (Roxb.)de Wilde	Caesalpiniaceae	Bark	Oligomenorrhoea	Fresh bark 60g crushed decoction 40 ml daily	Oral
38	<i>Hibiscus rosa-sinensis</i> L.	Malvaceae	Flower	Oligomenorrhoea	Fresh flower boiled with cow milk,	Oral



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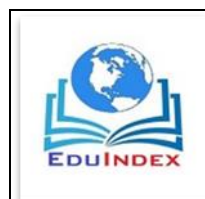
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					concentrated	
Dysmenorrhoea						
39	<i>Aloe vera</i> (L.)Burm. f.	Liliaceae	Leaves	Dysmenorrhoea	Expressed juice with honey	Oral
40	<i>Carica papaya</i> L.	Caricaceae	Fruit	Dysmenorrhoea	Fresh fruits expressed juice is taken	Oral
41	<i>Cinamomumzeylanicum</i> Blume.	Lauraceae	Bark	Dysmenorrhoea	2g of each ingredient boiled in 250ml of coriander water	Oral
42	<i>Syzygiumaromaticum</i> L.	Myrtaceae	Bud	Dysmenorrhoea		
43	<i>Zingiberofficinale</i> Rosc.	Zingiberaceae	Dried rhizome	Dysmenorrhoea		
44	<i>Cocas nucifera</i> L.	Palme	Tender leaf	Dysmenorrhoea	Tender leaves are ground jaggery	Oral
45	<i>Punicagranatum</i> L.	Punicaceae	Fruit	Dysmenorrhoea	Expressed juice is taken	Oral
46	<i>Ferula asafoetida</i> L.	Apiaceae	Latex	Dysmenorrhoea	5g of asafoetida is mixed with 5 ml of breast milk	Oral
47	<i>Trigonellafoenum-graecum</i> L.Uluva	Fabaceae	Seed	Dysmenorrhoea	Seeds are boiled in water and taken as drink	Oral
48	<i>Trigonellafoenum-graecum</i> L.Uluva	Fabaceae	Seed	Dysmenorrhoea	Powdered Seeds are mixed with	Oral



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					ghee and given to young girls	
49	<i>Terminaliachebula</i> Retz.	Combretaceae	Dried fruit	Dysmenorrhoea	Ingredients are mixed dried pounded taken with jaggery	Oral
50	<i>Terminaliabellirica</i> Gaertn	Combretaceae	Dried fruit	Dysmenorrhoea		
51	<i>Phyllanthusemblica</i> L.	Euphorbiaceae	Dried fruit	Dysmenorrhoea		

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