

# THE PROBLEM OF PAINFUL MENSTRUATION, DYSMENORRHOEA IN ADOLESCENT SCHOOL GOING GIRLS AND ITS MANAGEMENT YOGA AND NATUROPATHY

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**ABSTRACT:** Pain during menstrual cycle or periods is one of the most common health related problems being faced by girls today. It may be associated with other complaints or may be independent of other health related complaints. The problem of painful menstruation, which is medically known as Dysmenorrhoea is estimated to occur in 20% to 90% of women of reproductive age particularly young school going girls. It is reported mostly by young girls in their late teens. The prevalence of dysmenorrhoea in adolescent females has been reported to be 67.2% by one study and 90% by another. Girls with this problem mainly seek conventional treatment which includes prescription of antispasmodics containing atropine derivatives and analgesics containing paracetamol or phenacetin. Recent studies have shown the side effects of pain medications particularly on kidneys & liver. This has made the researchers to look out for safer form of therapies. Many researches have been conducted which have shown the efficacy of alternative therapies like herbal remedies, acupuncture etc. in the management of pain of dysmenorrhoea and to improve their quality of life.

A pilot study at Sambhavna Trust Clinic, Bhopal on Dysmenorrhoea in 2008 established the comparatively beneficial effects of Yoga on 56 girls. 18 girls were placed in Analgesic group and took allopathic antispasmodic medicine (MEFTAL) for 3 months. 17 girls were given placebo medicines for 3 months. Yoga treatment was given to 17 girls with Dysmenorrhoea. Yoga was taught to the girls in Yoga group everyday for 30 minutes for duration for one month (except Sundays) in the communities itself where the girls gathered and practiced yoga in a group. After one month, the girls were asked to practice yoga by themselves. Some girls practiced in the group while some girls preferred to practice yoga at home. The yoga therapy included Kriyas like Kapalbhathi, Asanas like Halasana, Sarvangasana, Matsyasana, Bhujangasana etc., Pranayamas like Anuloma Viloma and practice of Omkara Meditation.

The above mentioned yogic practices act on the reproductive organs and regulate their functioning. Practice of Pranayamas help to reduce sympathetic dominance which also is one of the causes of Dysmenorrhoea pain. Moreover, practice of Yoga helps in establishing a balance between the endocrine & reproductive systems, thus regulating the hormonal control of the menstrual mechanism.

The assessment for reduction in pain was done using Pain scale in the form of Dallas questionnaire of pain and menstrual regularity was assessed using Menstrual Calendar before starting of the study and at the end of 3 months study period. After the study period of 3 months, a follow up was done for duration of 3 months.

The study revealed a significant reduction in symptoms of Dysmenorrhoea as shown by reduction in the Dallas pain scale score. 15 girls in Yoga group reported absence of pain during periods after 3 months of yoga practice and during the follow up period. None of the girls reported aggravation or no relief in problem. 6 girls in Analgesic group reported reduction in pain during periods after 3 months of taking analgesic medicines and during the follow up period. 6 girls reported no change in pain during periods after 3 months of taking analgesic medicines and during the follow up period. 4 girls reported increase in pain during periods after 3 months of taking analgesic medicines and during the follow up period. 1 girl in Placebo group reported reduction in pain during periods after 3 months of taking placebo medicines and during the follow up period. 8 girls reported no change in pain during periods after 3 months of taking placebo medicines and during the follow up period. 6 girls reported increase in pain during periods after 3 months of taking placebo medicines and during the follow up period.

**Keywords:** Pain, Dysmenorrhoea, Yoga, Naturopathy

Dysmenorrhea can be literally translated as "difficult monthly flow."

(Ref- Collin's English dictionary, 10<sup>th</sup> edition, 2009)

Dysmenorrhoea is defined as painful menstruation.

Today, painful menstruation or dysmenorrhoea is one of the most frequent of all gynecological complaints. Dysmenorrhea can be manifested in the form of different kinds of pain, including sharp, throbbing, dull, nauseating, burning, or shooting pain. It is

commonly seen in young women particularly those who lead sedentary lives. Although, pain during menstrual cycle is a problem which is encountered by many women only for a few days of a month i.e. during 3 to 4 days of menstrual cycle, it is of economic & sociological importance because patients are often incapacitated from work and/or social life for many days during each menstrual cycle. This also has adverse psychological impact. Therefore, its treatment is of great importance.

Before considering the intervention, we should understand the different types of dysmenorrhoea.

Depending on the presence or absence of an underlying disease, there are two types of dysmenorrhoea:

✓ **Primary Dysmenorrhea** is menstrual pain that's not a symptom of an underlying gynecologic disorder but is related to the normal process of menstruation. Primary dysmenorrhea is the most common type of dysmenorrhea, affecting more than 50% of women, and quite severe in about 15%. Primary dysmenorrhea is more likely to affect girls during adolescence. Fortunately for many women, the problem eases as they mature, particularly after a pregnancy. Although it may be painful and sometimes debilitating for brief periods of time, it is not harmful.

✓ **Secondary Dysmenorrhea** is menstrual pain that is generally related to some kind of gynecologic disorder. Most of these disorders can be easily treated with medications or surgery. Secondary dysmenorrhea is more likely to affect women during adulthood.

(Ref- Encyclopedia Britannica, [www.britannica.com](http://www.britannica.com), last updated 1-16-2014)

**Medically, Dysmenorrhoea has been classified into following types:**

1) **Congestive Dysmenorrhoea:** In this type, the pain often starts before onset of bleeding. The pain starts between three and five days before onset of menstruation. It is often relieved by starting of menstrual flow. The causes of this type of dysmenorrhoea may be or may not be associated to any underlying disease of pelvic area. It is often corrected by modifications in diet, treatment of constipation and introduction of exercise in case of sedentary workers.

2) **Spasmodic Dysmenorrhoea:** This is commonest type of dysmenorrhoea. Almost all females suffer from this type of dysmenorrhoea at some time of their life. The pain develops on the first day of menstrual period. The pain is severe, interemittent and spasm like. If severe, it may cause nausea, vomiting, faintness or collapse. Often, severe episode of pain is followed by a phase of less severe pain in abdomen, pelvic area or front of thighs. The spasmodic type of dysmenorrhoea pain lasts for around 12 hours. Because of its severity, it is of socio-economic importance. The causes for this type of dysmenorrhoea can be obstruction in the genital tract, hormonal imbalances, stress, anxiety, weak pain threshold etc.

3) **Membranous Dysmenorrhoea:** This type of dysmenorrhoea is rare and has a genetic disposition. The pain during menstruation is associated with passage of membranes which resemble uterine endometrium microscopically.

4) **Ovarian Dysmenorrhoea:** In this type of dysmenorrhoea, the pain is felt for two to three days before menstruation in right or left lower abdominal or pelvic areas.

**Symptoms of Dysmenorrhoea:**

- ✓ Pain in pelvic area or lower abdomen
- ✓ Pain in lower back
- ✓ Abdominal pain
- ✓ Pain in Antero- medial aspect of thighs
- ✓ Loss of appetite or Anorexia
- ✓ Nausea or Vomiting
- ✓ Rarely, Fainting or Collapse or Shock

**Causes of Dysmenorrhoea:**

- ✓ Sedentary life style
- ✓ Constipation
- ✓ Flatulent distension of upper colon
- ✓ **Primary Dysmenorrhea is thought to be caused by excessive levels of prostaglandins**, hormones that make your uterus contract during menstruation and childbirth. Its pain probably results from contractions of your uterus that occur when the blood supply to its lining (endometrium) is reduced.
- ✓ Sympathetic parasympathetic imbalance influenced by cyclical changes in genital tract or imbalance in the autonomic nerve supply of uterus causing muscle spasm in uterus leading to pain.
- ✓ Cervical obstruction causing delayed passage of menstrual blood & clots.
- ✓ Endocrinal factors such as Progesterone which causes contraction of myometrium and narrowing of cervical canal by acting on smooth muscles of cervix.

- ✓ Psychogenic causes like anxiety and unnecessary fears are more prone to dysmenorrhoea
- ✓ Low pain threshold
- ✓ **Secondary Dysmenorrhea may be caused by a number of conditions including** Fibroids, Adenomyosis ( the tissue that lines the uterus (called the endometrium) begins to grow within its muscular walls), a sexually transmitted infection (STI), endometriosis( fragments of the endometrial lining that are found on other pelvic organs), pelvic inflammatory disease (PID), which is primarily an infection of the fallopian tubes, but can also affect the ovaries, uterus, and cervix, an ovarian cyst or tumour, the use of an intrauterine device (IUCD) etc.

### Management of Dysmenorrhoea:

#### Conventional treatment:

1. Conventional treatment includes prescription of antispasmodics containing atropine derivatives and analgesics containing paracetamol or phenacetin.
2. Non-steroidal anti-inflammatory drugs (NSAIDs) are effective in relieving the pain of primary dysmenorrhea.
3. Prescription of hormonal preparation to treat endocrinal causes of dysmenorrhoea is common. These include Progestational agents, drugs which inhibit action of prostaglandins and thereby reducing myometrial activity, surgical dilatation of cervix etc.

(Ref- Shaw's Textbook of Gynaecology, P.No. 310-315)

#### Alternative therapies:

1. The patients should be counseled for their problem by explaining the menstrual process and causes of pain. They should also be given sex education.
2. If the patient is a sedentary worker, he should be introduced to an exercise regimen such as Yoga or other forms of exercise.
3. Correction of Constipation and other Gastrointestinal disturbances should be considered as important part of therapy. Inclusion of a nourishing diet is also very important.
4. Acupuncture and Acupressure
5. Nutritional supplements like Thiamine, Vitamin B12, Fish oil have been advised by some alternative medicine specialists but there is no proper methodological study.
6. Yogic practices i.e asanas, pranayamas, relaxation and meditation have proven very beneficial in the treatment of Dysmenorrhoea. Apart from increasing the circulation to the reproductive organs, they increase the flow of vital energy to these organs and establish a balance among hormones regulating menstruation. Asanas which are particularly beneficial are Sarvangasana, Halasana, Bhujangasana, Ardhamatsyendrasana etc. Pranayamas like Nadishodhana help in the treatment of Dysmenorrhoea by establishing a balance between Sympathetic & Parasympathetic nervous system. Relaxation techniques in Shavasana help in reconditioning of body- mind complex and provide relief. Meditation also helps to change the psychological status of the girls with Dysmenorrhoea.
7. Naturopathic procedures mainly act by improving blood circulation to the reproductive organs and by relieving congestion. The treatment used for Dysmenorrhoea include Revulsive compress over pelvic region, Neutral Hip Bath, Revulsive Hip Bath, Mud pack to abdomen, Abdominal pack etc. depending upon the type of Dysmenorrhoea.

### ROLE OF YOGA IN TREATMENT OF DYSMENORRHOEA

Yoga is an ancient science and probably is the first known to mankind to maintain and promote health. As a system of treatment, it has gained worldwide popularity. Yoga experts around the world have always claimed that Yoga can prevent and treat a number of health problems. Numerous scientific studies using the modern scientific techniques carried out in different parts of world have shown that many yogic practices have health promotive and curative abilities. Yoga can prevent and treat diseases by using the energies inside the body, improving the circulation and waste disposal thereby cleansing the cells. As a practice, yoga aims to harmonize the body & mind. The benefits of Yoga apply to three aspects of physical health – Prevention, Cure and Rehabilitation. Yoga treats the individual as a whole (holistic approach) and not just the symptoms. Therefore, Yoga is just not a system of physical exercises but a just not a system physical exercises but a psycho physiological system of therapy. The school of Yoga which has gained world-wide popularity is Hatha Yoga. Hatha Yoga is slow paced and gentle form of Yoga which focuses on simple practices like Asanas, the postures, Pranayamas, the breathing techniques and Kriyas, the purificatory acts which intend to stretch the muscles, massage and cleanse the internal organs.

A pilot study was done at **Sambhavna Trust Clinic, Bhopal on Dysmenorrhoea in 2008**. In this study, a total of 56 girls with Dysmenorrhoea were studied for the comparative efficacy of Yoga. 18 girls were placed in Analgesic group and took allopathic antispasmodic medicine (**MEFTAL**) for 3 months. Out of these, 16 girls participated till the end of the study period. 17 girls were given placebo medicines for 3 months. Out of these, 15 girls participated till the end of the study period. Yoga treatment was given to 17 girls with Dysmenorrhoea. Out of these, 15 girls participated till the end of the study period. Yoga was taught to the girls in Yoga group everyday for 30 minutes for duration for one month (except Sundays) in the communities itself where the

girls gathered and practiced yoga in a group. After one month, the girls were asked to practice yoga by themselves. Some girls practiced in the group while some girls preferred to practice yoga at home.

The yoga therapy given to 17 girls of yoga group consisted of the following yogic practices, which were introduced progressively and were carried over until the end of their one month training period:

- i. Kriyas: Kapalbhati
- ii. Asanas: Halasana, Sarvangasana, Matsyasana, Bhujangasana, Dhanurasana, Shalabhasana, Shavasana
- iii. Pranayamas: Anuloma Viloma

### How Yoga works?

The above mentioned yogic practices act on the reproductive organs and regulate their functioning. Asanas, by causing alterations in intra abdominal pressure, give a massaging effect to these organs which helps in increasing arterial supply, venous drainage and waste disposal from these organs.

Asanas also help in relieving congestion in these organs, especially uterus, which is one of the reason for Dysmenorrhoea pain. Practice of Pranayamas help to reduce sympathetic dominance which also is one of the causes of Dysmenorrhoea pain. Moreover, practice of Yoga helps in establishing a balance between the endocrine & reproductive systems, thus regulating the hormonal control of the menstrual mechanism.

The assessment for reduction in pain was done using **Pain scale in the form of Dallas questionnaire of pain and menstrual regularity was assessed using Menstrual Calendar** before starting of the study and at the end of 3 months study period.

After the study period of 3 months, a follow up was done for duration of 3 months in which the assessment was done using pain scale in the form of Dallas questionnaire of pain and menstrual regularity was assessed using Menstrual Calendar.

The study revealed a significant reduction in symptoms of Dysmenorrhoea as shown by reduction in the Dallas pain scale score.

15 girls in Yoga group reported absence of pain during periods after 3 months of yoga practice and during the follow up period. None of the girls reported aggravation or no relief in problem.

6 girls in Analgesic group reported reduction in pain during periods after 3 months of taking analgesic medicines and during the follow up period. 6 girls reported no change in pain during periods after 3 months of taking analgesic medicines and during the follow up period. 4 girls reported increase in pain during periods after 3 months of taking analgesic medicines and during the follow up period.

1 girl in Placebo group reported reduction in pain during periods after 3 months of taking placebo medicines and during the follow up period. 8 girls reported no change in pain during periods after 3 months of taking placebo medicines and during the follow up period. 6 girls reported increase in pain during periods after 3 months of taking placebo medicines and during the follow up period.

**TABLE 1- RESULTS OF THE PILOT STUDY**

S. No.	GROUP	TOTAL NUMBER OF PARTICIPANTS	NUMBER OF GIRLS WHO IMPROVED	PERCENTAGE OF GIRLS WHO IMPROVED
1	YOGA	15	15	100%
2	ANALGESIC	15	06	40%
3	PLACEBO	15	01	6.66%

**CONCLUSION:** Yoga is a valuable means of giving relief to the girls and women suffering from the pain every month during their menstrual cycle. This will not increase their productivity in day to day life but also increase their self confidence. Moreover, the side effects of taking analgesics can be prevented. Yoga not only corrects the physiological imbalances in the body but also modifies the mental health by its deeper & subtler effects on body, mind & soul. IN terms of Panchakosha theory, it can be said that yoga establishes a balance among the koshas especially Manomaya Kosha, Pranamaya Kosha and Annamaya Kosha thus imparting a harmonious function of body & mind as a single holistic unit.

So, Yoga education can be made a part of compulsory education in schools so that children can be developed into healthy and productive citizens.

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