



**MINISTRY OF HIGH EDUCATION AND SCIENTIFIC RESEARCH**

**THI QAR UNIVERSITY COLLEGE OF MEDICINE  
GYNECOLOGY DEPARTMENT**

***DYSMENORRHEA STUDYING OF  
MEDICAL COLLEGE STUDENTS IN  
2020 2021***

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## **Abstract**

large percentage of women in productive age suffer from dysmenorrhea and it is defined as painful uterine cramps that precede and accompany menses. Primary dysmenorrhea is related to an overproduction of uterine prostaglandins which induces myometrium hypercontractility and arteriolar vasoconstriction, both involved in painful menstrual cramps. It often interferes with their daily physical and emotional aspects. It is the leading cause of short-term class absenteeism and is associated with a negative impact on academic and daily activities.

*Objectives;* to Study the character (personal) and dysmenorrhic of the medical College Students, Comparison of these character among second and fifth Stages of medical Students and Studying of the role of these character on development of dysmenorrhea. *Method;* This cross-sectional study was conducted in Dhi Qar city on medical College Students during interval between march 2021 and June 2021 for Students of second and fifth Stages. *Results;* the outcomes reported as: There is no relationship between dysmenorrhea and number of stage. Most of students have regular menstrual cycles except 8% of them. 5% sudden onset. 15% have severe pain during menstruate 2% from fifth stage students and 13% from second stage. 43% from all not use drug 22% from second stage students and 21% from fifth stage. 14% of them used injection. 29% of them have continuous pain more than 1 day about 10 % fifth stage students and 19 % second stage. The most drug used to relieve pain is non steroidal anti inflammatory drugs. The association symptoms is mostly fatigue, leg and back pain, nausea and small percentage with vomiting. The pain mostly range from mild to moderate and small percentage with severe pain. The most relieving factor used is drug and used hot water bag, cinnamon and rest, Most of students have moderate or mild amount of blood during menstruation. The pain of menstrual periods rang from hours to one day. Most of students have normal vaginal discharge. *Conclusion;* From the study it can be concluded that dysmenorrhea is a very common problem among young girls, and they experience a number of physical and emotional symptoms associated with dysmenorrhea, and with the increased intensity of pain in occurrence of dysmenorrhea the probability of experiencing these symptoms is also increased.

## ***Introduction***

Dysmenorrhea is a Greek term for “painful monthly bleeding.” Dysmenorrhea can be classified as primary and secondary dysmenorrhea. Primary dysmenorrhea is a lower abdominal pain happening during the menstrual cycle, which is not associated with other diseases or pathology. In contrast, secondary dysmenorrhea is usually associated with other pathology inside or outside the uterus. Dysmenorrhea is a common complaint among women during their reproductive age. Dysmenorrhea is associated with significant emotional, psychological, and functional health impacts.

## ***Etiology***

Many theories have explained the etiology of dysmenorrhea since the 1960s. This includes psychological, biochemical, and anatomical etiologies. The anatomical theory included abnormal uterine positions and abnormalities in shape or the length of the cervix. Zebitay et al., in their study, proposed a positive correlation between the cervical length and the volume and intensity of dysmenorrhea. However, the biochemical theory has proven to be stronger than others according to several homogenous studies.

※ Associated risk factors are :-

- Age
- Smoking
- Attempts to lose weight
- Higher body mass index
- Depression/anxiety
- Earlier age at menarche
- Nulliparity
- longer and heavier menstrual Flow
- Family history of dysmenorrhea
- Disruption of social networks

**Primary dysmenorrhea:** Prostaglandin F (PGF) is the main contributor to the cause of dysmenorrhea. The time of the endometrial shedding during the beginning of menstruation is when the endometrial cells release PGF. Prostaglandin (PG) causes uterine contractions, and the intensity of the cramps is proportionate to the amount of PGs released after the sloughing process that started due to dropping hormonal surge.

Secondary dysmenorrhea: Secondary dysmenorrhea presentation is a clinical situation where menstrual pain can be due to an underlying disease, disorder, or structural abnormality either within or outside the uterus. There are many common causes of secondary dysmenorrhea, which include endometriosis, fibroids (endometriomas), adenomyosis, endometrial polyps, pelvic inflammatory disease, and maybe even the use of an intrauterine contraceptive device.

## ***Epidemiology***

Dysmenorrhea is one of the common gynecological problems among all women regardless of age or race. It is one of the most frequently identified etiology of pelvic pain in females. The prevalence of dysmenorrhea can vary between 16% and 91% in women of reproductive

age, with severe pain observed in 2% to 29%. Agarwal et al. showed the prevalence of dysmenorrhea to be 80% in adolescents. Of that, approximately 40% had severe dysmenorrhea.

The symptoms associated with dysmenorrhea include gastrointestinal symptoms such as nausea, bloating, diarrhea, constipation, or both, along with vomiting and indigestion. Also, irritability, headache, and low back pain are prevalent among women presenting with primary dysmenorrhea. Tiredness and dizziness are also associated with dysmenorrhea. Dysmenorrhea is associated with significant impairment in quality of life between 16% to 29% of women. Furthermore, 12% of the monthly school and work activities are lost due to absenteeism because of dysmenorrhea.

## ***Pathophysiology***

The pathophysiology of primary dysmenorrhea is not well understood. Nevertheless, the identified cause is due to the hypersecretion of the prostaglandins from the uterine inner lining. Prostaglandin F<sub>2</sub>alpha (PGF-2a) and Prostaglandin PGF<sub>2</sub> increases the uterine tone, and also causes high-amplitude contractions of the uterus. Also, vasopressin has been linked to primary dysmenorrhea. Vasopressin increases the uterine contractility and can cause ischemic pain due to its vasoconstriction effects.

The uterine contractility is observed to be more prominent in the first two days of the menstrual period. Progesterone levels drop before menstruation, which

leads to increased production of PGs' triggering dysmenorrhea. Endometriosis and adenomyosis are the most common causes of secondary dysmenorrhea in premenopausal women.

## ***History and Physical examination***

A comprehensive history, along with adequate physical examination, is important to establish the diagnosis. History of the location of pain, onset, characteristics, and duration, along with associated symptoms like fatigue, headache, diarrhea, nausea, and vomiting, could be helpful to establish a diagnosis.

For primary dysmenorrhea, the physical examination is usually normal. A pelvic examination is not necessary for adolescents and women with characteristics of primary dysmenorrhea/ Pelvic examination is indicated in adolescents and women who have previously been sexually active and when the secondary cause is suspected or if there is a lack of response to treatment. The common findings that indicate secondary dysmenorrhea are:

Young age (around menarche) primary dysmenorrhea vs. older age > 25 years old (secondary dysmenorrhea)

Fluid in the vaginal vault of foul odor or whitish grayish in color. (Pelvic Inflammatory Disease)

Associated dysuria, dyspareunia, dyschezia, infertility, nodularity, adnexal masses, tenderness (endometriosis, non-gynecological etiology)[19]

Abnormal bleeding with the enlarged symmetrical uterus (Adenomyosis)

Abnormal bleeding with the enlarged asymmetrical uterus (Fibroids)

Obstructive anatomical abnormalities and history of other congenital anomalies Pelvic masses (fibroids, neoplasms, ovarian cysts)

Evaluation

Primary dysmenorrhea is diagnosed, depending upon the history and physical examination.

A pelvic examination is important for evaluating dysmenorrhoea if the history of onset and duration of lower abdominal pain suggests secondary dysmenorrhoea or if the dysmenorrhea is not responding to medical treatment. The use of ultrasound in the evaluation of primary dysmenorrhea has little significance.

However, ultrasound can be useful in differentiating secondary dysmenorrhea and causes that include endometriosis and adenomyosis.

Secondary dysmenorrhoea affects all women any time after menarche, while it can happen as a new symptom for females in their 30s or 40s. It can be

associated with different intensity of pain and other symptoms such as dyspareunia, menorrhagia, intermenstrual, postcoital bleeding.

The pregnancy tests using urinary human chorionic gonadotropin (B-HCG) are useful in history suggestive of suspected pregnancy.

Patients who are at risk of sexually transmitted infections (STIs) or when pelvic inflammatory disease (PID) is suspected will need endocervical or vaginal swabs.

If indicated by clinical examination and history, to rule out suspected malignancy cervical cytology samples may be required.

Magnetic resonance imaging (MRI) or Doppler ultrasonography may be required if torsion of adnexa, adenomyosis, or deep pelvic endometriosis is suspected or if there are inconclusive findings on the transvaginal ultrasonography.

Laparoscopy may be indicated when all the non-invasive investigations have been carried out and the cause remains unknown.

## ***Treatment***

### ***Pharmacological Treatment***

Nonsteroidal anti-inflammatory drugs (NSAIDs) are considered to be the first line of treatment for dysmenorrhea. NSAIDs are very effective in the treatment of dysmenorrhea in comparison to placebo or other therapy. NSAIDs exert their benefit in the treatment of dysmenorrhea by inhibiting cyclooxygenase enzyme, thereby blocking prostaglandin productions.

In a systematic review comparing different NSAIDs to placebo in the treatment of dysmenorrhoea, Marjoribanks et al. concluded that no NSAIDs are safer or more effective than others. However, there is evidence that around 20 percent of patients with dysmenorrhea do not respond to treatment with NSAIDs. Fenamates (mefenamic acid) may have slightly better efficacy than the phenyl propionic acid derivatives (ibuprofen, naproxen) because fenamates have a dual action of blocking the production of PGs and inhibiting their action. One study recommended ibuprofen and fenamates to be preferred in terms of safety

and efficacy. NSAIDs are still more effective compared to paracetamol. However, paracetamol is still a valid alternative where NSAIDs are contraindicated. Paracetamol with Caffeine and/or Pamabrom (short-acting diuretic) showed reduced pain. COX-2 selective NSAIDs can be used, taking

into consideration its cardiovascular side effects; besides, they are not more effective or tolerable than NSAIDs. COX-2 selective NSAIDs and its PGs inhibition mechanism have been linked to delayed ovulation.

Oral contraceptive pills (OCPs) are reported effective in reducing the dysmenorrheic pain compared to placebo among adolescents. Many other studies argued against the effectiveness of OCPs as a treatment for dysmenorrhea due to small sample sizes and limited comparative data.[39][40] OCPs have a mechanism by limiting endometrial lining growth. It decreases the production of prostaglandins. Low levels of PGs are noted in the menstrual fluid of women on OCPs. Contraceptive pills users appeared to have significantly lower rates of dysmenorrhea and needed less additional analgesics.

### ***Non-pharmacological Treatment***

Maintaining an active lifestyle and a balanced diet that is rich in vitamins and minerals are generally recommended for better health outcomes. In particular, such diet and lifestyle are useful to reduce the intensity of the dysmenorrhea.

Though different types of exercise are generally recommended due to several health benefits and low or no risk, it also helps reduce the intensity of dysmenorrhea. No clear evidence about certain exercise activity or specific duration but moderate exercise is recommended, especially in obese women. Heat is effective compared to NSAIDs and seems to be preferred easy therapy option by many patients with no side effects.

Still, high-quality studies needed. Food supplements, complementary or alternative medicine such as plant-based therapy, Chinese medicine, and supplements are being used for dysmenorrhea. Further, they are not regulated by the FDA. Overall there is insufficient evidence to recommend the use of any of the other herbal and dietary therapies. The effectiveness of acupuncture is supported by a few studies which lack active comparisons and lack sound methodological techniques.

## ***Prognosis***

Dysmenorrhea has been associated with a major impact on woman's day to day life. Such impact is reflected in the rates of absenteeism from school or work. Dysmenorrhea could also limit women's participation in sports or social events. Furthermore, there are associated emotional stressors



associated with dysmenorrhea. Dysmenorrhea is a public health matter that has an economic impact. Only in the United States, it is estimated to be around 140 million working hours per year. However, with the recommended treatment options, the prognosis for primary dysmenorrhea is generally good. Mild and moderate dysmenorrhea usually responds well to NSAIDs. Severe dysmenorrhea still responds to NSAIDs but may require higher doses or using combination/adjuvant therapy. In the case of persistent dysmenorrhea, the secondary causes of dysmenorrhea should be investigated. Prognosis of secondary dysmenorrhea will depend on the type, location, and severity of the cause.

## ***Complications***

Primary dysmenorrhea complications can be summarized by the intensity of the pain affecting the women's wellbeing and their daily activities. Since primary dysmenorrhea is not linked to any pathology or disease, there are no known complications. In contrast, secondary dysmenorrhea complication varies depending on the etiology. Complications may include infertility, pelvic organ prolapse, heavy bleeding, and anemia.

## ***Objectives of study***

1. Study the character (personal) and dysmenorrhic of the medical College Students.
2. Comparison of these character among second and fifth Stages of medical Students.
3. Studying of the role of these character on development of dysmenorrhea.

## ***Methodology***

### ***Study design***

This cross-sectional study was conducted in in Dhi Qar city on medical College Students during interval between march 2021 and June 2021 for Students of second and fifth Stages.

### ***Inclusion criteria***

There is lower abdominal pain happening during the menstrual cycle.

### ***Exclusion criteria***

medical College Students of second and fifth Stages don't have lower abdominal pain during the menstrual cycle.

### ***Questionnaires***

- Your name ?
- Your age ?
- Your stage ?
- Your marital status ?
- Your blood group ?
- Onset of pain ?
- Duration of pain ?
- Severity of pain (mild, moderate, sever )
- Nature of pain (continuous, intermittent)
- Any relieving factors ?
- Any associated symptoms ?
- Any drugs used to relieving pain with duration of using and results ?
- Described vaginal discharge ?
- What's the age of menarche ?
- Cycle regularity ?
- Cycle length ?
- Duration between two menses ?
- Blood amounts ?

### ***Method***

100 participants recruited to the study from 2nd and 5th stages students of Thi Qar medical college using electronic forms involved the above questionnaire that's needed short answer. The permission is taken from all including students for using their information for that study.

## **Results**

In this study taken 100 samples of Thi Qar medical students fifth stag and second stag the outcomes reported as :

1. There is no relationship between dysmenorrhea and number of students stage.
2. There is no relationship between dysmenorrhea and students blood group.
3. Most of students regular menstrual cycles except 8% of them have irregular menstrual cycles.
4. 5% of them have sudden onset
5. 15% of them have severe pain during menstruate 2% from fifth stage students and 13% from second stage students
6. 43% from all not use drug 22% from second stage students and 21% from fifth stage students.
7. 14% from all used injection.
8. 29% of them have continuous pain more than 1 day and about 10% from fifth stage and 19 % from second stage students.
9. The most drug used to relieve pain is non steroidal anti inflammatory drugs.
10. The association symptoms is mostly fatigue, leg and back pain, nausea and small percentage with vomiting
11. The pain mostly rang from mild to moderate and small percentage severe pain.
12. The most relieving factor used is drug, used hot water bag, cinnamon and rest.
13. Most of students have mild to moderate amount of blood during menstruation.
14. The pain of menstrual periods rang from hours to one day.
15. Most of students have normal vaginal discharge.

## **Discussion**

Sample from Thi Qar medical students in 100This is research taken second stage and five stages to detect most common characteristics and problems of dysmenorrhea like onset and severity and length and period and relieving or aggrieved factor and another characters like vaginal discharge and injectable therapy used

There is some limitations in this study because dependent on history only to collect data and not do examination or some investigation like ultrasound or hormonal tests

In this study taken among Thi Qar medical students reported high prevalence of dysmenorrhea among stage five and second in comparism with other similar studies reported like prevalence among medical students in % and others study taken from University of health sciences 40.7Delhi about %71.8students in Ethiopia about

## ***Conclusion***

From the study it can be concluded that dysmenorrhea is a very common problem among adolescent girls, and they experience a number of physical and emotional symptoms associated with dysmenorrhea, and with the increased intensity of pain in occurrence of dysmenorrhea the probability of experiencing these symptoms is also increased.

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