PREVALENCE OF DYSMENORRHEA IN FEMALE MEDICAL STUDENTS AT SAVEETHA MEDICAL COLLEGE AND HOSPITAL

Obstetrics And Gynecology

Dr. Aiman Abbasi*	Assistant Professor, Department Of Obstetrics And Gynecology, Saveetha Medical College And Hospital *Corresponding Author
S. Sreenidhi	MBBS Student

ABSTRACT

Dysmenorrhea is an important health problem, that affects their quality of life of young women and it is one of the leading causes of repeated school and work absenteeism. The purposes of this study was to determine the prevalence and risk factors for dysmenorrhea among medical students and its impact on their quality of life.

METHODS: A prospective study was carried out in Saveetha medical college and hospital, Chennai.150 medical students aged between 16-23years were included. Standardized questionnaires were used to obtain relevant data. Data was analyzed using Chi-sq. test, correlation and regression analysis by SPSS version 16.

RESULTS: The prevalence of dysmenorrhea was 75.9%. The mean age of menarche is 13-14 years with 64% of the sample size. 73.3% students have regular periods and 89.3% of them have bleeding for less than or for 6 days. 54.4 % of the sample size use NSAID drugs for dysmenorrhea.

KEYWORDS

INTRODUCTION:

Dysmenorrhea is one of the most common health problems among females. Dysmenorrhea refers to a cyclical lower abdominal or pelvic pain which may radiate to the back or to the thighs, occurring during menstruation often accompanied by other symptoms including dizziness, fatigue, sweating, backache, headache, nausea, vomiting, and diarrhea. It is divided into two types: Primary dysmenorrhea and secondary dysmenorrhea. Primary dysmenorrhea is the one, in which there is cramping pain in the lower abdomen at the onset of menstruation in the absence of any identifiable pelvic disease. Secondary dysmenorrhea is a menstrual pain associated with underlying pathology and its onset might be years after menarche. True incidence and prevalence of dysmenorrhea are not clearly established in India. Studies from various parts of India reported the prevalence of dysmenorrhea ranges between 50 to 87.8%9[7-12].

Premenstrual syndrome (PMS), also described as premenstrual tension (PMT), is a symptom complex recognized primarily by cyclic changes associated with ovulatory cycles. It occurs 7–14 days prior to menstruation and spontaneously resolves after menses. It has been postulated that it represents a syndrome which is the result of multiple biochemical abnormalities. These might include estrogen excess, progesterone deficiency, pyridoxine deficiency, increased carbohydrate intolerance, increased production of vasopressin, prostaglandin, aldosterone, prolactin, etc., the classic symptoms of PMS includes increasing breast tenderness, abdominal bloating, headache, sleeplessness, fatigue, emotional liability, mood swings and depression, irritability, fluid retention and weight gain beginning 7-14 days prior to menses.[2]

Non-steroidal anti-inflammatory drugs which inhibit the synthesis of prostaglandins, are highly effective in treating primary dysmenorrhea, especially when they are started before the onset of menses and continued through the day 2.[3]

Morbidity due to dysmenorrhea has a significant impact on public health. Dysmenorrhea is a common cause of sickness absenteeism from both classes and work by the female student community. It may be so severe as to affect daily activity. Despite its high prevalence and associated negative effects, many women do not seek medical care for this condition.[4] To those who do, NSAIDS are usually prescribed to treat the pain and resume the daily activities and prevent absenteeism from work and classes.

AIMS AND OBJECTIVES:

• To estimate the prevalence of dysmenorrhea among female medical students in Saveetha medical college and hospital.
• To assess the usage of drugs for dysmenorrhea.

METHODOLOGY:

This is an observational cross-sectional study in which the data will be collected by a self-administered questionnaire. The study was done among 150 female medical students in SMCH. The questionnaire included an informed consent, questions about demographic details, menstrual cycle, associated symptoms, dysmenorrhea, drugs used for it, stress and exercise.

INCLUSION CRITERIA:

Female medical students who are willing to participate.

EXCLUSION CRITERIA:

Female medical students who are not willing to participate**.**

STUDY DESIGN:

It is a descriptive and observational study. Data was collected by a self-administered questionnaire.

Consent was included in the first part of the questionnaire, stating that the subject's participation was completely voluntary and that the data collected will only be used for research and no other purpose. The questionnaire includes demographic details of the subject and menstrual history with questions about dysmenorrhea, associated symptoms , effect on daily activities , class hour absences and NSAID drug usage.

The dysmenorrhea was graded by multidimensional scoring system (MSS).

Multidimensional Scoring system (**MSS**)

• Grade 0: Menstruation is not painful and daily activities are not affected.
• Grade 1(mild): Menstruation is painful but seldom inhibits normal activity. Pain killers are rarely required.
• Grade 2 (moderate): Menstruation is moderately painful and it affects daily activities. Pain killers are required; however, they give sufficient relief so that absence from class is unusual.
• Grade 3(severe): Menstruation is extremely painful and associated with vegetative symptoms (headache, fatigue, vomiting and diarrhea). Daily activities are clearly inhibited. Painkillers provide no relief.

STUDY DURATION:

January 2019 – June 2019

SAMPLE SIZE:

150
by the formula,
$N = [Z^2 * P * (100-p)]/L^2$,
Where Z=1.96, p=50, L=0.08 .

SAMPLING TECHNIQUE:

Non-probability sampling technique. The sample population included

female medical students of SMCH who were willing to answer the self-administered questionnaire.

STATISTICAL ANALYSIS:
Statistical software SPSS version16. Multiple logistic regressions to assess the factors associated with variables p value < 0.05 is considered statistically significant.

RESULTS:
Distribution of subjects by age:

Age	Percentage
16	0
17	0
18	1.3
19	17.3
20	26.7
21	44
22	8
23	2.7

Distribution of subjects by age:

Age of menarche	Prevalence percentage
</=12	30.7
13-14	64
>/=15	5.3

Distribution of subjects by grade of dysmenorrhea: The total prevalence of dysmenorrhea is 75.9%.

Grade of dysmenorrhea	Prevalence percentage
No pain	24.1
Mild	49.3
Moderate	17.3
Severe	9.3
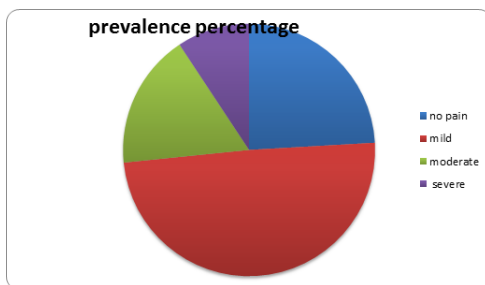
Distribution of subjects by the menstrual flow (no. of days of menstrual bleeding):

Number of days	Percentage
</=6	89.3
>/=7	10.7

Distribution of subjects by menstrual regularity:

Regularity	Percentage
Irregular	26.7
Regular	73.3

Distribution of subjects by drug usage for dysmenorrhea:

Drug usage	Percentage
Yes	54.4
No	45.6

Dysmenorrhea with age at menarche (in%):

Age at menarche/pain	No Pain	Mild	Moderate	Severe	Total
</=12	8.3	14.6	6.7	1.3	30.9
13-14	14.6	33.3	9.3	6.7	63.9
>/=15	1.3	1.3	1.3	1.3	5.2
Total	24.2	49.2	17.3	9.3	100

Dysmenorrhea with menstrual regularity:

Regularity/pain	No pain	Mild	Moderate	Severe	Total
Irregular	6.8	14.6	4	1.3	26.7
Regular	17.3	34.6	13.3	8	73.3

Total	24.2	49.2	17.3	9.3	100

Association of duration of menstrual bleeding and age of menarche with Dysmenorrhea:

Factors	Frequency	Prevalence percentage	Odds ratio	Chi-Square	p value
Age of menarche					
<13	34	22.6	0.85	0.16	0.69
>/=13	80	53.2			
Menstrual regularity					
Irregular	30	20	0.92	0.03	0.86
Regular	84	56			
Menstrual flow (by no. of days of bleeding)					
</=6	102	68	1.06	0.009	0.92
>/=7	12	8			

*p <0.05 is considered statistically significant

Out of the 150 participants, 75.9% of them have dysmenorrhea and 9.3% have severe dysmenorrhea which affects daily activity and doesn't get relieved by NSAID drug intake. The median age of menarche is 13-14 years with 64% of the sample size. 73.3% students have regular periods and 89.3% of them have bleeding for less than or for 6 days. 54.4 % of the sample size use NSAID drugs for dysmenorrhea.

Subjects whose age of menarche is less than 13 have 0.85 times more odds of having dysmenorrhea than those more than or at 13 years of age. Those who have irregular menstrual cycles are 0.92 times more likely to have dysmenorrhea than those with regular cycles. Subjects with an average menstrual flow (</=6 days of bleeding) have 1.06 times more odds of getting dysmenorrhea than those with menstrual bleeding which lasts for or more than 7 days.

After the analysis, we infer that the association between age of menarche and dysmenorrhea, between menstrual regularity and dysmenorrhea and between menstrual flow and dysmenorrhea are not statistically significant.

DISCUSSIONS:
Most common menstrual disorder in adolescent girls is dysmenorrhea scoring over vaginal discharge or low abdominal pain. In my study population of 16-20 females there is high prevalence of dysmenorrhea, i.e. 75.9% of the subjects. Severe dysmenorrhea was found to be prevalent in 9.3% of the study population. Several studies have determined the prevalence of dysmenorrhea including a survey of teenagers on Ghana (74.4%)[5] and Nigeria (72%)[6].

Given the magnitude of the problem it becomes imperative that we rise to the growing needs of our adolescent girls. This symptom should form an important target in our reproductive health programmes. This observational study received full participation and consent and is well representative and generalizable. Since this study is cross-sectional, we cannot make definitive interpretations.

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