Original Article

Prevalence of dysmenorrhea and impact on young medical students; A cross sectional study on students of medical colleges of Lahore, Pakistan

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Objective: To examine the prevalence of dysmenorrhea among medical students in Public medical colleges of Lahore and to study the strategies adopted by the students to wane their symptoms.

Methodology: Students from public medical colleges were selected as a sample by using non probability convenient sampling method. A total of 1125 questionnaires were distributed and 1025 were returned and used for analysis. The response rate was 73.33%.

Results: The mean age of students was 21.53±1.892 years. The mean menarche age was 11±1.54 years and mean duration of bleeding was 4 days. Amongst 1023 students, 83.6% had dysmenorrhea before or during bleeding. Pain was mild in 16.74%, moderate in 32.5% and severe in 38.6% using Visual Analogue Scale. One third (33%) had visited any of the medical or gynecological consultants for their pain and amongst those, 65% had been taking analgesics for pain relief.

Conclusion: The prevalence of dysmenorrhea was 78.6% amongst the students in medical college of Lahore. There is a need for more research into this aspect and more awareness should be made as over the counter drugs may be harmful. (Rawal Med J 202;45:430-433).

Keywords: Dysmenorrhea, menstrual pain, medical student.

INTRODUCTION

Dysmenorrhea is defined as lower abdominal pain which occurs during menstruation and may start two to three days before the onset of menstruation. Pain may be associated with backache, nausea, headache, vomiting, weakness and other gastrointestinal symptoms.[1] Dysmenorrhea has prevalence of 67-90% among females of 17-24 years.[2] An Australian survey reported 93% of teenagers to be dysmenorrhic and 41% of adolescents and young girls to have a limitation in daily activities and social withdrawal. Chronic recurrent episodic pain can cause absence from university or work and can create inconvenience for social activities and sometimes restrict over presence where high performance is required.[3]

Primary dysmenorrhea is thought to be caused by excessive levels of Prostaglandins, which make the uterus contract during menstruation and childbirth.[4] Pain results when the blood supply to endometrium is reduced resulting in contractions. Other factors that may make the pain even worse include a retroverted uterus, lack of exercise, psychological stress, smoking, drinking alcohol, being overweight and early menorrhea. Secondary dysmenorrhea may be caused by a number of conditions, including fibroids, adenomyosis, sexually transmitted infection, endometriosis, pelvic inflammatory disease, an ovarian cyst or tumor and the use of intrauterine devices.[5]

Common factors associated with dysmenorrhea are early menarche, a positive family history of dysmenorrhea, long and heavy menstrual flow, lack of physical activism and obesity.[3]

The major risk factors that interplay are work related factors, lifestyle characteristics, personal variation of pain perception and menstrual history.[6,7] Anatomical abnormalities in female reproductive tract may also act as risk factors.[8-10] Smoking, age, higher body mass index, null parity, earlier age at menarche, longer and heavier menstrual flow, usage of oral contraceptives, and positive family history are some other risk factors for dysmenorrhea.[11] Emotional (anxiety, depression) and behavioral problems may also cause dysmenorrhea.[7] The aim of this study was to examine the prevalence of dysmenorrhea among medical students in Public medical colleges of Lahore.

METHODOLOGY

A self-designed questionnaire with a maximum of 20 questions was used for this cross sectional study in order to collect data which included questions about pain severity, symptoms of the students, treatment and effects dysmenorrhea had on daily life. Medical colleges were visited and the questionnaire was administered to a group of 50 students to know how valid the questionnaire was and the data of these 50 students was not included in the study. Few changes were made after the pilot study and later the questionnaire was administered to a larger number of students.

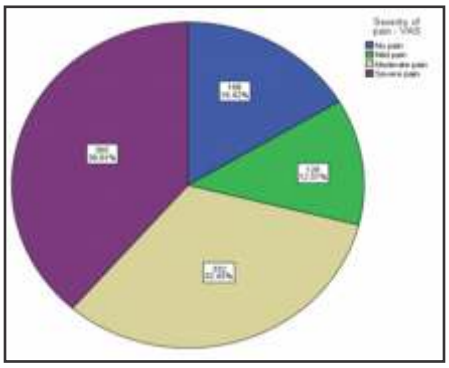
Students of M.B.B.S., B.D.S., D.P.T., and D. Pharmacy with age 18-25 years were included in the study after taking their informed consent. Any student with past or present medical conditions, systemic illness or prior surgical history were excluded. A total of 1125 questionnaire were distributed and 1023 students fully filled the questionnaires.

Pain severity was estimated using Visual Analogue Scale (VAS); 1-4 mild, 5-7 moderate and 8-10 severe. Other symptoms such as dysuria, dyschezia, dyspareunia, acyclic pelvic pain, vomiting, headache, syncope and fatigue were defined and categorized as never, a few times per year and every month. Treatment like ibuprofen, paracetamol or opiates taken was inquired by the students and its dose was asked. Students were also asked if they visited the general practitioner/primary healthcare clinic, gynecologist, emergency or the college nurse due to the pain. They were also inquired of the pain effected their daily life i.e. social and academic absenteeism and related it to their academic performances.

RESULTS

The mean age of students was 21.53±1.892 years. None of the students was smoker or taking any drug. The mean menarche age was 11±1.54 years. The mean duration of bleeding was 4 days. Out of 1023 students, 855(83.6%) had dysmenorrhea, 168(16.74%) responded that they did not have pain during/before menstruation Fig. 1). The prevalence of dysmenorrhea was found to be 78.6%.

Fig. 1. Severity of dysmenorrhea.



Amongst 1023 students, 33% responded to have visited a medical consultant for dysmenorrhea. 65% took analgesics like acetaminophen or ibuprofen whilst the rest responded to use hotpacks or tea/coffee for their pain and 7% had eggs in order to lessen their pain. Symptoms other than pain were abdominal pain, dysuria, headache, fatigue and vomiting (Table 1). Dysmenorrhea affected student's social life and has compromised their activity status (Table 2).

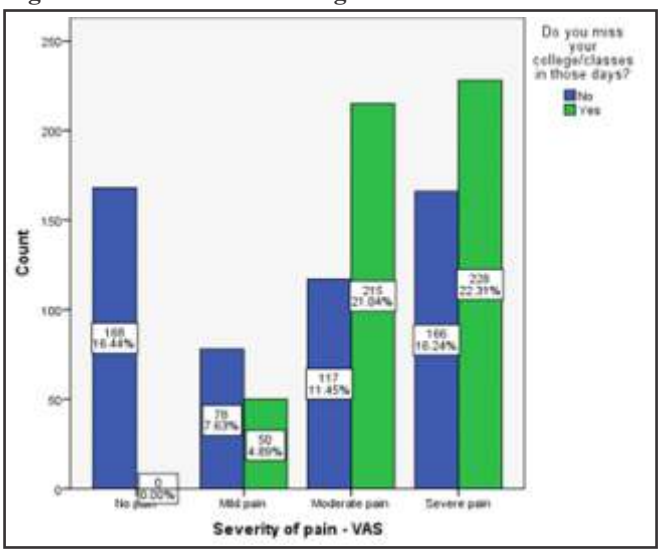
Table 1. Menstruation related symptoms.

	No pain N=168	Mild N=128	Moderate N=332	Severe N=395	Total N=1023
Fatigue					
No fatigue	1	36	28	0	65
Every month	57	25	73	125	280
Few times per year	38	55	164	188	445
Uncertain	44	26	67	96	233
Vomiting					
No vomiting	0	41	78	0	119
Every month	55	19	32	126	232
Few times per year	38	55	88	186	367
Uncertain	47	27	134	97	305
Headache					
No headache	0	12	21	16	49
Every month	58	57	90	174	379
Few times per year	38	54	170	105	367
Uncertain	44	19	51	114	228
Abdominal pain					
No pain	0	0	0	0	0
Every month	58	44	92	125	319
Few times per year	38	72	174	187	471
Uncertain	44	26	66	96	233
Dysuria					
No dysuria	4	71	151	298	524
Every month	8	14	11	7	40
Few times per year	48	42	32	3	125
Uncertain	80	15	138	101	334

Table 2. Work and social limitation.

	No pain	Mild pain	Moderate pain	Severe pain	Total
Limitation towards work					
Not limited	168	74	43	9	294
Mildly limited	0	20	118	4	142
Moderately limited	0	5	91	150	246
Severely limited	0	29	80	232	344
Social activities					
Not limited	168	74	43	7	292
Mildly limited	0	20	118	44	182
Moderately limited	0	5	92	140	237
Severely limited	0	29	79	204	312

Fig. 2. Absenteeism from college.



Amongst 1023 students, 168 who did not have dysmenorrhea, none responded to be absent from their colleges. Amongst those having mild pain, 78 students did not have to be absent while 50 had to remain absent. Amongst those with moderate pain, 117 did not remain absent while 215 had to be absent. Amongst those with severe pain, 168 did not remain absent while 228 had to be absent Fig. 2).

DISCUSSION

Our findings demonstrate that dysmenorrhea has affected the students in medical colleges profusely, as 78.6% of the students amongst 1023 has suffered monthly pain and 36% has experienced severe pain. In addition to menstrual pain, extra-genital symptoms were also quite prevalent among our participants, e.g. headache, fatigue, dysuria, abdominal pain and vomiting. Approximately 2/3rd of younger females reported absenteeism from their college and other leisure activities due to dysmenorrhea several times per year. They have also reported experiencing negative effects on their academic performances.

Similar studies have been reported from Australia and Finland, which showed a higher rate of monthly absenteeism because of pain and had a lower medical consultation tendency.[12,13] Many respondents had consulted school nurses and midwives, but they cannot prescribe analgesics or hormonal treatment for menstrual pain. In addition to physical, psychological and social suffering this condition might have long-term negative economic impacts for the individual as well as for society.[14]

Systemic symptoms of dysmenorrhea such as vomiting, abdominal pain, fatigue and headaches can be quite disabling. This is also true for heavy bleeding, as 71% bled through their clothes and 38% needed double protection more than a few times per year.[15] These experiences and precautions can lead to embarrassment and stigma.

Adolescents fail to self-medicate adequately, which reflects the lack of awareness regarding the optimal use of analgesics. In a study from Gothenburg, Sweden,[16] it was shown that absenteeism from work or school occurred with a prevalence of 51% occasionally and 8% monthly, which unfortunately indicates no improvement in Sweden during these last 35 years.[17] The tendency to seek medical consultation was found to be continuously dropping over the years.[18]

Despite of all the possible limitations of our study, the present study calls for raising awareness and educate the teenagers, their guardians and health care providers so they encourage symptomatic treatment. Absenteeism from the medical colleges and schools should be investigated. Future researches should include larger sample size to find out the detrimental effects of dysmenorrhea and as the researchers did not get any financial assistance, they could not include students of all Universities and Colleges in the study.

CONCLUSION

The prevalence of dysmenorrhea was 78.6%

amongst the students in medical college of Lahore. There is a need for more research into this aspect and more awareness should be made as over the counter drugs may be harmful to young females.

Author Contributions:
Conception and design: Salwa Atta, Hafiza Komal Shehzadi
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Analysis and Interpretation of data: Salwa Atta, Tabinda Ashraf
Drafting of the article: Salwa Atta
Critical revision of article for important intellectual content: Sumra Riaz, Ansa Ikram
Statistical expertise: Salwa Atta
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