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Prevalence of Dysmenorrhea and Menstrual Characteristics among Adolescent School Girls: A Teaching Hospital Based Study.

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ABSTRACT

Background: Dysmenorrhea, defined as painful cramps that occur with men¬struation, is the most common gynecologic problem in women of all ages and races and one of the most common causes of pelvic pain which may radiate to the back or to the thighs, occurring during menstruation often accompanied by other biological symptoms including dizziness, fatigue, sweating, backache, headache, nausea, vomiting, and diarrhoea. Symptoms typically begin in adolescence and may lead to school and work absenteeism, as well as limitations on social, academic, and sports activities.**Methods:**Two schools randomly selected and from this all the girls who were willing to participate and in the age group of 14-18 years were included in the study. The total sample size was 134. The tool developed was a pretested semistructured questionnaire. The items included were age at menarche, presence and absence of dysmenorrhea, its duration, amount of blood loss, irregularity and symptoms experienced during menstruation related questions.**Results:** Majority of the girls with dysmenorrhea 56.7% report a menstrual cycle of 22-28 days, where as 32.8% of them have a menstrual cycle of 29-35 days and 10.4% report to have a menstrual cycle of more than 35 days. Maximum number of dysmenorrhic girls 82.8% reported 4-5 days of bleeding and few of them reported to have <3 days and 5-7 days of bleeding 7.5% and 9.7% respectively. 68.7% of the girls with dysmenorrhea reported presence of blood clots in their menstrual flow.**Conclusion:**This present shows the high prevalence of dysmenorrhea among adolescent school girls.

Keywords:Prevalence, Adolescent girls & Dysmenorrhea.

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INTRODUCTION

Dysmenorrhea, defined as painful cramps that occur with men¬struation, is the most common gynecologic problem in women of all ages and races,[1] and one of the most common causes of pelvic pain which may radiate to the back or to the thighs,[2] occurring during menstruation often accompanied by other biological symptoms including dizziness, fatigue, sweating, backache, headache, nausea, vomiting, and diarrhoea. Symptoms typically begin in adolescence and may lead to school and work absenteeism, as well as limitations on social, academic, and sports activities.[3] In spite of the fact of existence of painful menstruation in ancient literature, it was only in the last half of past century when dysmenorrhea has been recorded impartial scientific evaluation. Dysmenorrhea may be categorized into two distinct types: primary and secondary.

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Primary dysmenorrhea is defined as painful menses in women with normal pelvic anatomy, usually beginning during adolescence.[4] Secondary dysmenorrhea is menstrual pain associated with underlying pathology, and its onset may be years after menarche. There is a wide variation in the estimate of dysmenorrhea from studies around the world reporting a range between 28% and 71.7%.[5,6] Various studies in India revealed that the prevalence of dysmenorrhea varies from 33% to 79.67%.[7-11] However, the true incidence and prevalence of dysmenorrhea are not clearly established in India. According to studies dysmenorrhea is interrupting their educational and social life.[12] Aim of this present study was to be the prevalence of dysmenorregea and menstrual characteristics among adolescent school girls.

MATERIALS & METHODS

This present study was carried out in the Department of Obstetrics and Gynaecology, Faculty of Medicine and Health Sciences, SGT University, Budhera, Gurugram, during the period from July 2011 to March 2012. The data was collected from the schools present in Gurugram district. Female

medical students and female medico-social workers were trained for this study. Two schools randomly selected and from this all the girls who were willing to participate and in the age group of 14-18 years were included in the study. The total sample size was 134. The tool developed was a pretested semistructured questionnaire. The items included were age at menarche, presence and absence of dysmenorrhea, its duration, amount of blood loss, irregularity and symptoms experienced during menstruation related questions. The following criteria were used to define dysmenorrhoea:[13] Onset of pain within 6–12 hours after menarche, Lower abdominal or pelvic pain associated with onset of menses and lasting for 8–72 hours, Lower back pain during menses and Medial or anterior thigh pain. The survey was completed and data was analyzed for the results with percentages. The collected data was analyzed using descriptive and inferential statistics.

RESULTS&DISCUSSION

Table 1: Frequency and percentage distribution of sample characteristics.

Sr. no.	Characteristics	No. of Subjects (N = 134)	Frequency (%)
Age in years			
1.	<13	3	2.3 %
2.	14-16	81	60.4 %
3.	16-18	50	37.3 %
4.	>18	0	0.0 %
Body Mass Index			
1.	Under-weight	9	6.7 %
2.	Normal	101	75.4 %
3.	Over-weight	24	17.9 %
Length of Menstrual Cycle			
	22-28 days	76	56.7
	29-35 days	44	32.8
	>35 days	14	10.4
Number of days of Bleeding			
	<3 days	10	7.5
	4 - 5 days	111	82.8
	5-7 days	13	9.7
Presence of Blood Clots			
	Yes	92	68.7
	No	42	31.3

A total of 134 girls participated in the study. The average age of the participants was found to be between 14-16 years. Around 60.4% were in the age range of 14 to 16 years and 37.3 % were between 16-18 years. Majority of the participants (75.4%) had a normal body mass index (18-23 kg/m2), whereas underweight and overweight categories had 6.7 % and 17.9 %, respectively[Table 1]. Majority of the girls with dysmenorrhea 76 (56.7%) report a menstrual cycle of 22-28 days, whereas 44 (32.8%) of them have a menstrual cycle of 29-35 days and 10.4 (10.4%) report to have a menstrual cycle of more than 35 days. Maximum number of dysmenorrhic girls 111 (82.8%) reported 4-5 days of bleeding and few of them reported to have <3 days and 5-7 days of bleeding 7.5% and 9.7% respectively. 92 (68.7%) of the girls with dysmenorrhea reported presence of blood clots in their menstrual flow.

Table 2: Prevalence of dysmenorrhea in adolescent school girls.

Dysmenorrhea	No. of subjects (N = 134)	Frequency (%)
Present	105	78.4
Absent	29	21.6
Total	134	100

[Table 2] Shows the dysmenorrhea was reported by 105 (78.4%) of the total girls, whereas only 29 (21.6%) reported no dysmenorrhea.

Table 3: Shows the Distribution of Pain characteristics of girls with Dysmenorrhea.

Sr. no.	Characteristics	No. of Subjects N = 105	Frequency (%)
Onset of Pain			
1.	Before menses	25	23.8
2.	Day 1 of Menses	62	59.1
3.	Day 2 or 3 of Menses	18	17.1
No. of Pain days			
1.	1 day	33	31.4
2.	2 days	47	44.8
3.	3 days	21	20.0
4.	More than or equal to 4 days	4	3.8
Severity of Pain			
1.	Mild (2-4)	22	21.0
2.	Moderate (4-7)	64	61.0
3.	Severe (7-10)	19	18.0

[Table 3] Shows the 62 (59.1%) of the dysmenorrhic girls had onset of pain on Day 1 of menses, 18 (17.1%) on Day 2 or 3 of menses and 25 (23.8%) had onset of pain before menses. [Table 3 & Figure 1] Shows the 47 (44.8%) of the dysmenorrhic girls reported to have pain for 2 days, 33 (31.4%) for 1 day, 21 (20.0%) and 04 (3.8%) for 3 days and more than or equal to 4 days respectively. [Table 3 & Figure 2] Shows the 64 (61.0%) of the dysmenorrhic girls reported to experience moderate pain, 22 (21.0%) to have mild pain and 19 (18.0%) reported to experience severe pain during periods.

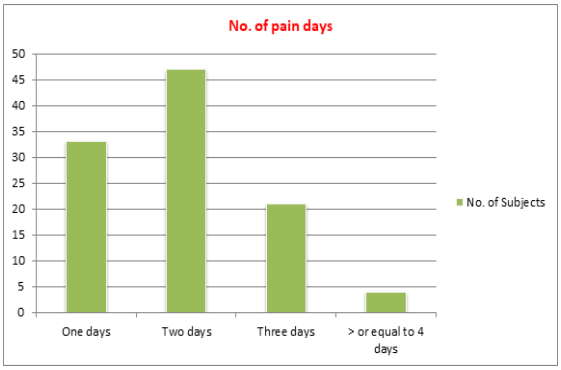

Figure 1: Shows the number of pain days.

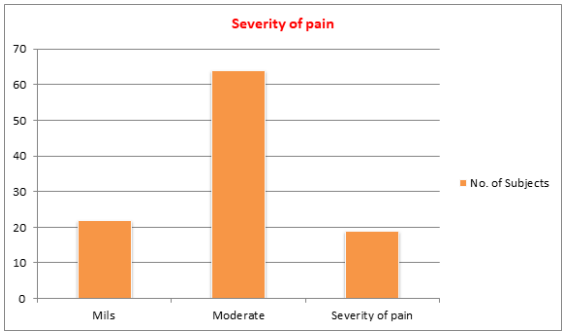

Figure 2: Shows the severity of pain.

This present study showed a high prevalence of dysmenorrhea, that is, 78.4 % among adolescent school girls of Gurugram district, Similar findings were reported by Sharma P, Malhotra C, Taneja DK etal (67.2 %),[14] Sharma M and Gupta S. (67%),[15]Mckay and Diem (67%),[16]Sundell G, Milsom I, Andersch B. (67%),[17]Jayashree R, Jayalakshmi VY. (74%),[18] and Harlow and Park (71.6%).[19] Comparatively lower prevalence had been reported by Sharma A, Taneja DK, Sharma P, et al (33%),[20] Nag (33.84%),[21] Singh MM, Devi R, Gupta SS. (40.7),[22] Dysmenorrhea seems to be Familial problem similar conclusion made by Avasarala AK and Panchangam S.in their study.[23] Average length of menstrual cycle was reported to be 22-28 days in majority (56.7%) of girls. Normal length of the cycle is considered as 21–35 days.[24] According to the study majority (82.8 %) of the dysmenorrhic girls had bleeding for 4-5 days, 9.7% and 7.5% had bleeding for 5-7 days and less than 3 days respectively. The finding correspond to the findings of the study done by KuralMool Raj, et al , according to which 74% dysmenorrhic girls experience bleeding for 4-5 days and 19.9% for 5-7 days and 5.7% for <3 days.[25] This present study shows that majority of the dysmenorrhic girls agreed for the presence of clots in their menstrual blood. The similar findings were revealed by the study conducted by KuralMool Raj,[25] It has been found in the present study that maximum (59.1%) of the girls experienced pain on Day 1 of cycle, 23.8% before menses and 17.1% on Day 2 or 3 of menses. Similar findings were obtained by KuralMool Raj, et al in his study on the menstrual characteristics of college going girls. The study revealed that majority of girls 47 (44.8%) of the dysmenorrhic girls reported to have pain for 2 days, 33 (31.4%) for 1 day, 21 (20.0%) and 04 (3.8%) for 3 days and more than or equal to 4 days respectively.[25] In this study, it was revealed that 21.28%, 62.77% and 15.96% of girls had mild, moderate and severe pain, respectively. Similar findings were obtained by KuralMool Raj, et al. in his study on the menstrual characteristics of college going girls.[25] Pain is extremely subjective symptom and it has been very difficult to quantify pain.[26] Researchers have, therefore, found out a way to measure pain by various scoring systems like VAS.[27] Depending on pain score obtained on VAS, pain was divided into mild, moderate and severe pain and thus it is called 3 point scale. In the present study, it was revealed that 21.0%, 61.0% and 18.0% of girls had mild, moderate and severe pain, respectively. In a study conducted by Ortiz in 1539 students of Mexican University, author concluded that dysmenorrhea was mild in 36.1%, moderate in 43.8% and severe in 20.1%.[28]Maitri shah et al., have found that 18%, 40% and 42% of students had mild, moderate and severe pain (dysmenorrhea), respectively.[29]

CONCLUSION

In conclusion, the prevalence of dysmenorrhea is high in this study population. Dysmenorrhoea is a very common problem among adolescent girls, and they experience a number of physical and emotional symptoms associated with dysmenorrhea and it also affects their quality of life. It can be better managed by mental preparation and by appropriate change in lifestyle like regular physical exercise. Such high prevalence makes dysmenorrhea a significant public health problem among young students that demands some attention from policy makers.

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