

Menstrual Pattern and Disorders among Female Students of Kathmandu Medical College

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ABSTRACT

Introduction: Menstrual disturbances are common gynecological problem faced by many adolescent females. Female medical students are no exception. It not only interferes with their physical activity, it forces them to skip their regular classes. Study objective was to know the menstrual pattern and disorders among female medical students of Kathmandu medical college.

Material and Methods: A Cross-sectional study was conducted among 171 female students of basic sciences, Kathmandu Medical College and Teaching Hospital, Duwakot from March to May 2017. Pre-designed structured questionnaire was used for data collection.

Results: The mean age of study population was 19.81±1.05 years. The menarche age of the students was 12.95±1.08 years. 33.3% of students had irregular menstrual cycle which was associated with BMI. The majority of the students (67.3%) complained of premenstrual symptoms. About half (53.8%) of study population reported incidence of dysmenorrhea. Significant association was found between dysmenorrhea and class absenteeism (p<0.05).

Conclusion: High prevalence of menstrual disorders was reported in the medical students which resulted in class absenteeism. Educating students about menstrual health by trained health professionals and teachers can help in reducing their psychological and physical stress.

Keywords: Menstrual Pattern, Medical Students, Dysmenorrhea

INTRODUCTION

The female reproductive system is characterized by regular cyclic changes known as menstrual cycle. The most essential feature is periodic bleeding from vagina which occurs along with the mucosal shedding of uterus.¹

Female's first menstruation is called menarche. It is one of the indicators of maturity and can be used as a developmental landmark of a pubertal female.² Menstrual cycle is an important physiological phenomenon. Variations in menstrual pattern is frequently observed among young females.³ Disorders in cycles or its irregularities are a major gynecological problem among female adults especially adolescent^{4,5} and a major source of anxiety to them and their family. Information on a woman's menstrual pattern will aid in clinical evaluation of gynecological problems and will make womanhood easier for adolescent women and adults.⁶ Menstrual disorders are leading causes of academic and work absenteeism among young females resulting in greater loss of income and decreased quality of life. Despite their high prevalence and the associated ill effects, many females

are reluctant to use medical care for these conditions.^{7,8} Female undergraduate medical students are no exception. However negligible data are available on menstrual pattern and disorders among Nepalese medical students. This study was conducted to know the normal menstrual pattern and disorders among them.

MATERIAL AND METHODS

A Cross-sectional study was conducted among 171 female students of basic sciences (MBBS, BDS and BSc Nursing) Kathmandu Medical College and Teaching Hospital, Duwakot from March to May 2017.

Pre-designed structured questionnaire was used for data collection. The purpose and objectives of the study was explained to the students and written consent was taken. The students filled up the forms in privacy. They were made aware about their right to withdraw from the study at any time and were instructed not to write their names on the questionnaire for confidentiality. The study protocol was approved by Institutional Review Committee, Kathmandu Medical College. Students with primary amenorrhea, history of abdominal or pelvic surgery and currently under medication for any systemic illness were excluded from the study.

Questions related to menstruation:

Menarche age, cycle length, presence of irregular cycle, presence of secondary amenorrhea, oligomenorrhea, polymenorrhea, duration of menstruation in days, hypomenorrhea, hypermenorrhea.

Presence of dysmenorrhea, degree of dysmenorrhea and treatment needed for dysmenorrhea, presence of premenstrual syndrome, absenteeism in class.

Secondary amenorrhea: no period during the last 3 months.

Polymenorrhea: menstrual interval lasting less than 21 days.

Oligomenorrhea: menstrual interval more than 35 days.

Hypomenorrhea: duration of period <3 days and slight blood loss.

Hypermenorrhea: duration of period >7 days and blood loss

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	N	Minimum	Maximum	Mean	Std. Deviation
Age	171	18	23	19.81	1.05
Menarche age (years)	171	9.00	16.00	12.95	1.08
Average menstrual blood flow (days)	171	2.00	8.00	4.84	1.27
Average cycle length (days)	171	19.00	60.00	30.21	5.86

Table-1: Mean and standard deviation of age, age at menarche, duration of menstrual blood flow and cycle length

		Frequency (%)
Cycle length	<21 days	7 (4.1%)
	21-35 days	147 (86%)
	>35 days	17 (9.9%)
Duration of menstruation	<3 days	6 (3.5%)
	3-7 days	160 (93.6%)
	>7 days	5 (2.9%)
Irregular cycles		61 (35.7%)
Premenstrual Syndrome		115 (67.3%)
Dysmenorrhea		92 (53.8%)
Treatment needed		29 (17%)

Table-2: Menstrual pattern and disorders of female students

BMI		Frequency (%) of irregular cycle	Chi Square test
Underweight	34(19.9%)	12 (7%)	P< 0.05
Normal	113(66.1%)	33 (19.3%)	
Overweight	16(9.4%)	10 (5.8%)	
Obese	8 (4.7%)	6 (3.5%)	
Total	171 (100%)	61 (35.7%)	

Table-3: Relationship of body mass index (BMI) and occurrence of irregular cycles.

>80 ml.

Dysmenorrhea: painful menstruation and its associated symptoms (mild, moderate, severe)

Premenstrual syndrome (PMS): occurrence of one premenstrual symptom in a list of symptoms which include mild psychological discomfort, feelings of bloating and weight gain, breast tenderness, swelling of hands and feet, various aches and pain, poor concentration, sleep disturbances and changes in appetite, restricted to the luteal phase of menstrual cycle and cease with commencement of menstrual flow.

STATISTICAL ANALYSIS

Data was collected, compiled and analyzed by using Statistical Package of Social Science (SPSS) software version 21. Data were represented as mean and standard deviation (SD) or frequencies and percentages as applicable. Chi-square test was used to find association between variables. P-value of < 0.05 was considered as statistically significant.

RESULTS

A total of 171 female students took part in the study, aged between 18 to 23 years with mean age of 19.81±1.05 years. All the students included in the study were unmarried. In this study mean and standard deviation of menarche age of the students was 12.95±1.08 years (Table 1)

Table 2 shows menstrual pattern and distribution of menstrual irregularities among our study group. This study showed 61 (35.7%) students with irregular cycles. The tendency of irregular cycles was more in overweight and obese students (Table 3). There was a significant association between BMI of the students and irregular cycles ($P < 0.05$).

92(53.8%) of total participants experienced dysmenorrhea, out of which 53.3% said they had to be absent in class due to dysmenorrhea. Our result showed significant association ($P < 0.05$) between college absentees and severity of dysmenorrhea (Table 4).

DISCUSSION

Menstrual cycle is an inevitable part of a woman's life and an important indicator of normal sexual and reproductive health. The age of menarche is influenced by nutritional status, socioeconomic condition, health status and genetic factors. It is typically between 12 and 13 years. The age at menarche in our study was consistent with the earlier studies conducted in Nepal⁹ and other countries^{3, 8, 10}.

The mean cycle length of the girls in our study was 30.21±5.86 days. Majority of students (86%) had normal cycle between of 21-35 days, which was similar to other studies^{9, 11}.

Mean duration of menstrual blood flow was 4.84±1.27 days. 93.6% had normal menstrual blood flow between 3-7 days, comparable with other studies^{9, 11}. However only 71.6% of students reported normal duration of blood flow in a study done by Nabila HAA¹⁰.

Irregular menstrual cycle and and dysmenorrhea are the most common menstrual disorders among adolescents. Our results revealed high percentage of medical students suffering from different kinds of menstrual disorders; 61(35.7%) students were suffering from irregular menstrual cycle consistent with other similar studies^{5, 10, 13}. In contrast, Sharma S et al.⁹ found higher prevalence (64.2%) of irregular menstrual cycle in a study done at Pokhara. Premenstrual Syndrome (67.3%) was the most common menstrual problem reported in our study. Nabila HAA et al.¹⁰ also reported high prevalence of PMS in their study, which affects on day to day activities of adolescent girls. These findings make it necessary to educate adolescent girls about the menstrual health to improve their mental and physical activities during menstrual periods.

In the present study about half students (53.8%) reported incidence of dysmenorrhea, out of which only 17% required treatment. This result is comparable to findings shown by Keda K et al.¹¹ and Rigon F e tal.¹² in their study.

Severity of dysmenorrhea was significantly associated with class absenteeism in our study ($p < 0.05$), which is consistent with study results shown by various researchers like Shete JS et al.⁸, Sharma S et al.⁹ and Cakir M et al.¹³ By many

Dysmenorrhea		Absentees		Total	Chi- square test
		No	Yes		
Severity	Mild	25	10	35	P < 0.05
		27.2%	10.9%	38.0%	
	Moderate	18	27	45	
		19.6%	29.3%	48.9%	
	Severe	0	12	12	
		0.0%	13.0%	13.0%	
Total		43	49	92	
		46.7%	53.3%	100%	

Table-4: Relationship between severity of dysmenorrhea and class absenteeism

researches it is evident that dysmenorrhea does not only cause class absenteeism among adolescent girls, it also hampers their social activities and work.

CONCLUSION

Despite the high incidence and ill effects of menstrual problems, adolescent girls withstand their pain and think it as a normal phenomenon. They are reluctant to seek medical advice for their problem. A proper solution would be introducing nationwide school/college education program on problems related to menstrual health by trained health professionals or teachers.

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