

Evaluation of Menstrual Pattern in Young College Girls

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Summary

With a view to cast a glance on menstrual pattern, a descriptive cross-sectional study was carried out among 158 purposely selected young college girls of Sylhet MAG Osmani Medical College and Sylhet Nursing Institute through self-administered structured questionnaire. Age of the respondents was between 18 - 26 years with a mean of 22.4 years. Minimum age at menarche was 10 years, while maximum age was 16 years with mean 12.8 years and median 13 years. It was observed that as many as 125 (79.11 %) respondents had regular menstrual cycle, whereas 33

(20.89%) had irregular cycle. Menstrual flow was average in 129 (81.65%), scanty in 8 (5.06%) and heavy in 21 (13.29%) respondents. At least 116 (73.42%) respondents conceded that they had painful menstruation (dysmenorrhoea) with a varying degree of severity. Of them, as many as 60 (51.72%) needed medical intervention either by analgesic and / or antispasmodic. About 57 respondents has family history of dysmenorrhoea.

To establish relationship between dysmenorrhoea and its family history, conduction of a large scale study has been suggested.

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Introduction :

Menstruation is a periodic and cyclical shedding of progestational endometrium accompanied by loss of blood. This peculiar function only present in women and in higher apes¹. Menstruation is the visible manifestation at the conclusion of one cycle of hormonal activity, marks the beginning of the next². It needs coordinated interplay of hypothalamo-pituitary- ovarian axis, functioning ovary, responsive endometrium and presence of patent utero-vaginal canal for the onset of menstruation. The first 4 - 5 days of menstrual cycle is menstrual phase with shedding of two third to four fifth of endometrium. The remaining days consists basically of a proliferative and secretory phases. Menarche, the first menstrual period of life, usually occurs between the ages of 10 - 16 years, the average being 13.5 years. The age at menarche varies to some extent with family, race, social class, family size, birth order, environment, diet and general health but not with climate.³ Menstruation tends to occur earlier in the higher social classes and in urban surroundings probably reflecting general health. It is more closely related to bone age than to chronological age. For the past couple of decades, the age of menarche is gradually declining with improvements of nutrition and environmental condition³.

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During active reproductive life menstruation occurs at approximately 28 days interval, but 21 - 35 days is accepted as normal. Duration of menstrual period between 2 - 7 days is accepted as normal, but it must be individualized. Nonetheless, there is wide variation in duration and amount of blood loss. Menstrual flow varies from 50 - 80 ml with an average of 45 ml. In practice, however, menses lasting more than seven days, or occur at an interval of 21 days or less, or which are subjectively thought to be heavy are considered as excessive³.

In teenage or in nullipara, menstruation may be associated with tolerable colicky pain at the beginning of mense due to uterine contraction. Pain of sufficient magnitude incapacitating the day-to-day activities is called dysmenorrhoea. Nearly 50 per cent women experience some discomfort in relation to menstruation. But in 5-10% individuals severe pain incapacitate them for several hours in each month.¹

First period of life is usually anovular, followed by irregular ovulation. Moreover, it takes about 2 years for regular ovulation to occur. Anovulatory cycles can result in excessive bleeding. This is typically found in the post-pubertal teenager with an immature hypothalamopituitary- ovarian axis.¹

This study was conducted among 158 young college girls to throw light on the menstrual pattern and problem related to menstruation.

Materials and Methods :

This descriptive cross-sectional study was conducted among 158 purposively selected young college girls of Nursing Institute, Sylhet, and undergraduate students of different session of Sylhet MAG Osmani Medical College, Sylhet. The study period was four months ranging from March 2002 to June 2002. Age at menarche, menstrual cycle with duration, menstrual flow including associated complaint such as dysmenorrhoea were the study variables. Data were collected through self-administered structured questionnaire.

Menstrual cycle was considered as regular one when it was within 21 - 35 days with a mean of 28 ± 2 days, while it was considered irregular when it was less than 21 days or more than 35 days. Menstrual flow was considered as scanty, average and heavy one based on number of sanitary towels used per day as mentioned by the respondents (1- 2, 3 -5 and > 5 sanitary towel per day as scanty, average and heavy menstrual flow respectively). Painful menstruation with pain ranging from dull ache to spasmodic of varying intensity was categorized as dysmenorrhoea. Data were analyzed manually and with the help of scientific calculator.

Results :

A total of 158 college girls were selected purposively and interviewed by self-administered structured questionnaire. Of them, 128 was from Sylhet MAG Osmani Medical College and 30 from Nursing Institute, Sylhet. Age of the respondents was between 18 - 26 years with a mean of 22.4 years. Of them, 9 (5.70 %) were married and 149 (94.30%) were single. Shortest age at menarche was 10 years, while highest age was 16 years with a mean of 12.8 years and median 13 years. Onset of menarche in 64 (40.51%) respondents was at the age of 13 years. Menstrual cycle was regular in 125 (79.11%) respondents, whereas 33 (20.89%) had irregular cycle (Table-I). Concerning menstrual period, it was found that a good number of respondents (148) had period within 2 to 7 days (Table- II).

Table- I

<i>Menstrual cycle N=158</i>		
Menstrual cycle	Frequency	Percentage
Irregular	33	20.89
Regular	125	79.11
Total	158	100

Table II

<i>Duration of Menstrual period N=158</i>			
Menstrual cycle Type	Duration in days		
	1 Day	2-7 Days	>8 Days
Regular	1	120	4
Irregular	2	28	3
Total	3	148	7

It was revealed that in 129 (81.65%) respondents menstrual flow was average, while in 8 (5.06%) it was scanty and was heavy in 21 (13.29%) respondents (Table-III). As discussed in materials and methods; menstrual flow was considered as scanty, average and heavy one based on number of sanitary towels used per day as mentioned by the respondents (1- 2, 3 -5 and > 5 sanitary towel per day as scanty, average and heavy menstrual flow respectively). At least 116 (73.42%) respondents disclosed that they had painful menstruation (Table- IV). Regarding severity, it was found that in 56 (48.27%) respondents pain was mild, whereas in 47 (40.51%) respondents it was moderate and in 13 (11.20%) pain was severe in intensity (Fig.-1). Those who had dysmenorrhoea, as many as 60 (51.72%) needed medical intervention either by analgesic and/or antispasmodic (Fig.-2). Moreover, at least 57 (49.14 %) respondents with dysmenorrhoea had family history of dysmenorrhoea (Table-V). However, the relationship either between type of menstrual cycle and dysmenorrhoea (χ^2 , df=1, 1.5; $P > 0.05$) or between dysmenorrhoea and family history was statistically insignificant. (χ^2 , df=1, 2.69; $P > 0.05$).

Table III

<i>Menstrual bleeding by type of cycle N=158</i>			
Menstrual cycle Type	Menstrual bleeding		
	Average	Scanty	Heavy
Regular	106	6	13
Irregular	23	2	8
Total	129(81.65%)	8(5.06%)	21(13.39%)

Table- IV

Types of menstrual cycle with dysmenorrhoea N=158

Menstrual cycle Type	Dysmenorrhoea	
	Present	Absent
Regular	89	36
Irregular	27	6
Total	116(73.42%)	42(26.58%)

χ^2 , df=1, 1.5; P > 0.05

Table-V

Dysmenorrhoea with family history N=116

Dysmenorrhoea with type of cycle	Family history of dysmenorrhoea	
	Present	Absent
Regular	40	49
Irregular	17	10
Total	57(49.14%)	59(50.86%)

χ^2 , df=1, 2.69; P > 0.05

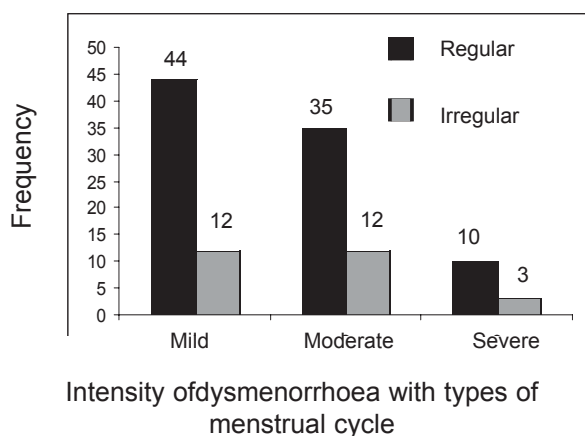


Fig.-1 : Multiple bar diagram showing severity of dysmenorrhoea with type of menstrual cycle

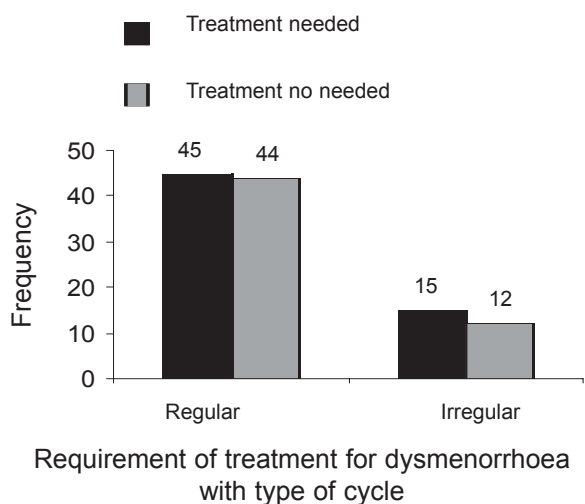


Fig.-2 : Multiple bar diagram showing requirement of treatment for dysmenorrhoea with type of cycle

Discussion :

In this study the age at menarche was 10 - 16 years with a mean of 12.8 years. This is in line with statement made by Datta.³ In a significant number of respondents, age of menarche was 13 years which is indicated by findings of study conducted by Chowdhury et. al.⁴ and corroborated by Datta,³ and Jeffcoate¹ as well. Median age at menarche was 13 years which is very much related to findings of study conducted by Grover et. al., Singh et. al. and Hedge et. al.⁵

In respect of regularity of menstrual cycle, it was revealed that it was regular in 125 (79.11%) respondents, whereas 33 (20.89%) had irregular cycle (Table-III). As many as three respondents had menstrual cycle over ninety days. Regarding menstrual flow, it was found that it was average in 129 (81.65%) respondents, while it was scanty in 8 (85.06%) and heavy in 21 (13.29%) respondents. This is more or less similar to the findings of study conducted by Chowdhury et al.⁵

A substantial number of respondents (116, 73.41%) disclosed that they had dysmenorrhoea with various degree of severity. Furthermore, majority of them (60, 37.97%) required medical intervention either with analgesic and/ or antispasmodic. This can be compared with the study findings of Chowdhury et al.⁵ where only 21.3% needed medical intervention. Moreover, at least 57 (49.14%) respondents with dysmenorrhoea had positive family history.

Conclusion :

This descriptive, cross-sectional study with sample size 158 was conducted to shed light on menstrual pattern and its related problem. To explore facts regarding menstruation however needs large group study. As incidence of dysmenorrhoea is affected by social status, age, occupation and family history¹. It

has been suggested to test relationship between type of menstruation and dysmenorrhoea, and dysmenorrhoea with family history through large group study.

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References :

1. Neerja Bhatta (Revised and updated). Menstruation and other cyclical phenomena, In Jeffcoates Principles of Gynaecology, 6th international ed. Arnold 2001: 81-86 : 88-99.
2. I.D. Cooke Menstrual cycle and ovulation, In Dewhursts Textbook of Obstetrics and Gynaecology for postgraduates, 6th edition, Blackwell Science Ltd 1999 : 28.
3. D.C. Datta. Menstruation, In Text Book of Gynecology, 3rd edition, New Central Book Agency, Calcutta 2001 : 74-88.
4. Chowdhury T.A., Akhter S. Survey of dysmenorrhoea in a group of college girls at Dhaka city. Journal of BCPS.1985; 3(1) : 12 - 16.
5. Usha R, Krishna and Vinita Salvi. Adolescent and pediatric gynecological problems, In Ratnam SS, Bhasker Rao K, Arulkumaran S, eds. Obstetrics and Gynaecology for postgraduates, Vol-2, 1st edition, Orient longman Ltd. 1994 : 293-301.