ORIGINAL ARTICLE

An Evaluation of Menstrual Pattern of Young Girls in A Medical Institution

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Abstract:

A cross sectional quantitative survey was done on 205 girls aged 17 to 25 years in Holy Family Red Crescent Medical College and B.A.S Nursing School, Dhaka. The aim of the study was to establish the typical experience of menstruation for young girls and determine the associated menstrual disturbance that require further investigation management of underlying pathology. Mean age of the subjects at menarche was 11.3years with a range being 8-16years. Mean duration of menstrual flow was 4.5 days and about 85.9% respondents had these type of flow. It was observed that72.6% subject had average menstrual flow. As many as 174 (84.9%) respondents had regular menstruation. At least 148 (72.2%) respondents conceded that they had painful menstruation (dysmenorrhoea) with varying degree of severity. The most prevalent menstrual symptoms were tiredness (50.2%) , backache (41.5%) and anger (32.6%). Prevalence of severe dysmenorrhoea was 10.2% whereas 22.9% and 39.02 % of participant had moderate and mild dysmenorrhoea respectively. Of them, as many as 40.4 % respondents needed medical intervention either by analgesic and / or antispasmodic. In conclusion, it can be mentioned that prevalence of dysmenorrhoea and menstrual irregularity among young female is high. Working ability is reported to be affected by menstrual pain. It could be possible to improve menstrual discomforts management by including awareness program.

Introduction :

Teenage girls go through the transition period of adolescence which extends from childhood to adulthood and is characterized by immense hormone changes. Owing to the immaturity of hypothalamic pituitary ovarian axis - menstrual cycle tend to be rather irregular[1]. Menstruation is a periodic and cyclical shedding of endometrium accompanied by loss of blood per vaginally. Only normal women and higher apes have this peculiar function[2]. At the conclusion of hormonal activity, menstruation is the visible manifestation. It needs coordinated interplay of hypothalmo- pituitary - ovarian axis, functioning ovary, responsive endometrium and presence of patent utero-vaginal canal for the appearance of menstruation[3]. Menarche is the first menstruation in life; usually occurs between the ages of 10-16 years, the average being 13.5 years. The age of menarche varies to some extent with family, race social class, family size, birth order, environment, diet and general health but not with climate. Menstruation tends to occur earlier in the higher social classes and in urban surroundings probably reflecting general health. For the past couple of decades, the age of menarche is gradually declining with improvements of nutrition and environmental condition[4]. During active reproductive life menstruation occur every 28±7 days in response to hormones. It is a natural phenomenon that occurs through out the reproductive years of every women's life during which blood loss per cycle is not greater than 50

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± 30 ml with or without discomfort[5]. A woman on an average undergo 400 menstrual cycles prior to menopause. The average menstrual cycle lasts for about 5 days, which accounts to approximately 67 months of menstrual bleeding over a lifetime[6]. The adult pattern of ovulatory cycles is 21 to 34 days long while the young females experience irregular pattern[7]. 75% of adolescent girls are reported to have menstrual dysfunction and is known to affect the normal daily activities. Delayed, irregular, painful and heavy menstrual bleeding are common in young age and are the leading cause to consult with physicians[8]. In teenage or in nullipara menstruation may be associated with tolerable colicky pain at the beginning of mense due to uterine contraction. Also, there are a number of physical, psychological and emotional symptoms that occur premenstrualy and during menstruation. Menstrual pain i.e. dysmenorrhoea and other symptoms cause school absence in 14-57% teenagers and interference with life activities for 15-59%[9,10]. First period of life is usually anovular, followed by irregular ovulation. More over, 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 hypothalamo-pituitary-ovarian axis. A cross-sectional study was therefore conducted to determine patterns of menstrual cycles among young girls and its related problems.

Materials and method :

This descriptive cross-sectional study was conducted among 205 young girls of B.A.S. nursing institute, Dhaka and under graduate medical students of different session of HFRCMC, Dhaka. The study period was 3 months from June 2009 to September 2009. Purposive sampling was adopted to select the subjects those women who cooperated to provide correct and complete information and fitted into the study criteria were included for the study. Age at menarche, menstrual cycle with duration, menstrual, flow including associated complaints such as dysmenorrhoea was the study variables. Data were collected through self administered structured questionnaire.

Inclusion criteria : Menstruating, unmarried young girls under the age of 25 years.

Exclusion criteria : Age more than 25 yrs or less than 17 yrs, married and those with known secondary dysmenorrhoea and other metabolic disorder.

Menstrual cycle was considered as, regular one when it was within 21 - 35 yrs with a mean of 28±2 days and it was considered irregular when it was less than 21 days or more than 35 days. Severity of dysmenorrhoea was measured by using the visual analogue scale developed by Revill et at[11]. Information regarding menstrual bleeding was obtained by using Higham chart[12]. Which is known as valid and reliable tool for this purpose. The data was analyzed using SPSS for version 16.0.

Results :

A total of 205 young girls were selected purposively and interviewed by self - administered structured questionnaire. Of them 158 was from Holy Family Red Crescent Medical College, Dhaka and 47 from B.A Siddique Nursing School, Dhaka. Demographic characteristic of the subject was presented in table I. It is evident that the participants were young adult aged between 17-25years with a mean age being 21 (±2.73) years. The major religion of the subject was Muslim (82.4%).Nuclear family system was predominant followed by joint families. Income is a most important variable affecting health and wellbeing of individuals; the selected subjects had family income varying from 10,000 to 25,000 Tk. Nearly 70% had family income ranged 10,000 to 25,000 Tk.

Shortest age at menarche was 8 years, while highest age was 16 years with a mean of 11.3 (±2.47) years. Onset of menstruation in 139 (67.8%) respondents was at the age between 11-13 years. Menstrual cycle was regular in 174 (84.9%) respondents, where as 31 (15.1%) had irregular.

Table-I : Demographic characteristic of subject

Demographic characteristics	Number	Percentage
Age		
17-21	169	82.4
> 21	36	17.6
Religion		
Muslim	162	79
Hindu	26	12.9
Christians	17	8.1
Types of Family		
Joint family	109	53.1
Nuclear	96	46.8
No response	0	o
Income (Monthly)		
< 10,000	19	9.3
10,000 - 25,000	58	28.2
>25,000	128	62.4

Table-II : Age of menarche (n=205)

Age	Number	Percentage
8-10	49	23.9
11-13	139	67.8
14 and above	17	8.29

Table-III : Duration of menstrual period (205)

Menstrual cycle	Duration in days		
Type	1 day	2-7 days	> 8 days
Regular	8	157	9
Irregular	5	19	7
Total	13	176	16

Table-IV : Amount of menstrual bleeding with type (n=205)

Menstrual cycle	Menstrual bleeding		
Type	Average	Scanty	Heavy
Regular	128	17	29
Irregular	21	4	6
Total	149(72.68%)	21 (10.2%)	35 (17.07%)

Table-V : Demographic characteristic of subject

Symptoms	Number
Pain	
Headache	26
Backache	85
Cramp	27
General ache	35
Tiredness	103
Autonomic reaction	
Nausea	22
Vomiting	13
Diarrhea	3
Water retention	
Bloated	3
Tender breast	31
Acne	41
Negative effect	
Loss of appetite	20
Craving	2
Anger	67
Mood swing	39
Insomnia	26

Table-VI : Types of menstrual cycle with dysmenorrhoea (n = 205)

Menstrual cycle	Dysmenorrhoea	
Type	Present	Absent
Regular	129	45
Irregular	19	12
Total	148 (72.2%)	57 (27.8%)

Table-VII: Characteristics of Dysmenorrhoea (n=148)

Dysmenorhoea	Number
Pain location	
Lower abdomen	62
Low back	31
Right side of abdomen	3
Left side of abdomen	4

Dysmenorhoea	Number
Pain characters	
Twisting	52
Sharp	21
Stinging	24
First experience of menstrual pains	
From the 1st period	58
After one year	73
Other	36
Pain starts each period	
Previous day	46
On first day	58
First or 2nd day	37
Pain length	
One day	55
1-2 day	59
2-3 day	32
Entire period	3

About 176 (85.9%) respondents had 2-7 days duration of menstrual cycle whereas 13 (6.3%) and 16 (7.8%) had one day and >8 days respectively. In was revealed that in 72.6% respondents menstrual flow was average, while in 10.2% was scanty and was heavy in 17.04% respondents.

The prevalence of menstrual symptoms were tiredness (50.2%), backache (41.5%) and anger (32.6%).

Almost 73% responders with regular and irregular menstruation, experienced dysmenorrhoea. The pain characteristics observed among the dysmenorrhoic females are presented in Table VII. The most frequent pain location was lower abdomen followed by low back. The characteristics of pain experienced were revealed as twisting or stinging sharp pain by majority of the participants. Nearly 50% of the participants mentioned to have experienced pain after one year of menarche, while 39% experienced pain from the first period further more, majority of the female with dysmenorrhoea mentioned that the pain commenced from first or 2nd day of menstruation.

From this study, it was revealed that, about 39.02%, 22.9%, and 10.2% respondents had mild, moderate and severe dysmenorrhoea respectively. Those who had dysmenorrhoea, as many as 83 (56.08%) needed medical intervention either by analgesic and/or antispasmodic.

Discussion :

The mean age of menarche observed in present study was 11.3 (±2.74) years. Which correlates with the current age as per reports from European and north American countries is 12.5 years while 12.8 ± 1.3 years is from turkey[13].

In respect of regularity of menstrual cycle, it was revealed that it was regular in 84.9% respondent where as 15.1% had irregular cycle. Irregularity in monthly sheeding is also indicated in different studies, percent occurrence from Lebanon[14]. Ganbia[15], India[16] varied from 12 to 18%. In present study, prevalence irregular cycle was 15.1%. It could be possible that the increase in the incidence of irregularity is due to changes in life style that is being introduced in different spheres of life.

Regarding menstrual flow, it was found that it was average in 72.6% respondents while it was scanty in 10.2% and heavy in 17.07% respondents. This is more or less similar to the findings of study conducted by chowdhury et at[17]. A substantial number of respondents (73%) disclosed that they had dysmenorrhoea with various degree of severity. It correlates the finding of study by andersh B et al[18]. Occurrence of severe pain during menstrual period accounts to 3-20% in most population[19] our result coincide with these report (10.2 %). Further more majority of them (40.4%) required medical intervention either with analgesic and / or antispasmodic. This can be compared with the study findings of hillen et all[20].

Conclusion :

This descriptive, cross - sectional study with sample size 205 in number was conducted to shed light on menstrual pattern and its related problem in young girls. To explore facts regarding menstruation and dysmenorrhoea with its effects on health of young girl , however need large group study.

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