A STUDY OF MENSTRUAL PATTERN IN ADOLESCENT GIRLSPrachi Pateriya¹, Anjali Kanhere²**HOW TO CITE THIS ARTICLE:**

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ABSTRACT: BACKGROUND: Menarche is most striking event in process of female puberty. Some girls seek medical attention for normal cycle variation. Others are unaware that their bleeding patterns are abnormal and may be attributable to significant underlying medical issues. Menstrual cycle, as a vital sign serves a powerful tool to assess normal development and to exclude pathologies.

AIM: To find out age of menarche, menstrual pattern and types of menstrual disorders. **METHOD:** A cross sectional study was conducted among 80 nursing students of nursing college, linked with Peoples college of Medical Sciences and Research centre, Bhopal. All girls in study group were below 19 years of age. Information was obtained in a self-administered proforma after verbal consent. Questionnaire was analyzed by subject expert & statistical analyst. **RESULTS:** Mean age of menarche in this study was 11 years, 40% have regular cycle. Mean duration of bleeding was 4-6days. Day of heaviest flow was day 2 in 60%. Menstrual cycle was of 25 -45 days. Dysmenorrhoea was present in 40% of adolescent girls. 30% had dysmenorrhea since menarche. 30% had premenstrual symptoms. The most common premenstrual symptom was general fatigue in 46%. Absence from the college was observed in 20%. 40% girls taken menstruation as normal phenomenon. 78% had discussed menstrual problems with someone, most commonly with their peers. **CONCLUSION:** Pattern of menstrual bleeding in all adolescent girls in order to identify possible pathology and to improve their quality of life should be assessed routinely.

KEYWORDS: Menarche, polymenorrhea, dysmenorrhea, menorrhagia, Adolescent, menstrual cycle.

INTRODUCTION: Menarche is most striking event and important milestone in process of female puberty. Menarche is a transition between childhood and adulthood. It is a normal physiological process and may be associated with various symptoms occurring before or during the menstrual cycle. The age at menarche shows many socioeconomic, environmental, nutritional and geographical differences in the societies.¹

Adolescent girls and their parents frequently remain unaware about normal menstrual pattern. Girls may not inform their parents about menstrual irregularities or missed menses. They are reluctant to discuss this topic with their parents, although they may discuss this with their age mates and peers.

The consequences of premenstrual, menstrual symptoms and disorders of menstruation influence not only the girl but also her family and society. In respect to adolescent girls it may manifest as loss of school days leading to poor progress in education.

Some girls will seek medical attention for cycle variations that actually fall within the normal range. Others are unaware that their bleeding patterns are abnormal and may be attributable to significant underlying medical issues with the potential for long-term health consequences.

Adolescent girls often do not receive accurate information about menstrual health because of culturally specific practices that lead to incorrect and unhealthy behaviors.

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For instance, menstruation may be perceived as a sign of femininity, fertility, youth or purification of the body, yet at the same time it is also linked with vulnerability and social taboos.

Evaluation of menstrual cycle should be a part of regular health check-ups for adolescent girls. It may lead to diagnosis of potentially serious health conditions, identification of abnormal menstrual patterns. Needed health care and counseling.

The following definitions were used to describe menstrual cycle disorders: polymenorrhea was defined as a menstruation interval lasting less than 21 days; Oligomenorrhoea as a menstruation interval of more than 35 days; dysmenorrhea as abdominal pain severe enough to interfere with normal activities, or require medication.

The present study, therefore, aims to determine the age at menarche and patterns of menstruation among adolescent girls in our area.

AIMS AND OBJECTIVE:

- To know the age of menarche among study population.
- To study normal or abnormal menstrual pattern in the study population.

MATERIAL & METHOD: A cross sectional study was conducted among 80 nursing students of nursing college, linked with Peoples college of Medical Sciences and Research centre, Bhopal. All girls in study group were below 19 years of age.

The project was approved by Research advisory committee and Institutional ethical committee of the Institute.

Informed consent of participants was taken for conducting the study.

A pre-designed, pre-validated questionnaire was used for data collection. The questions was administered in local language and properly explained to avoid any form of misunderstanding and to facilitate accurate response by the subjects.

The questionnaires was distributed and collected immediately after completion to prevent interpersonal communication and influence of peers on individual responses amongst the girls. The information was gathered on age at menarche, menstrual cycle pattern, premenstrual symptoms, and dysmenorrhea and associated symptoms. Data thus generated was entered and analyzed.

RESULT: Table 1 shows Age of menarche, among study population. 30(45%) girls started their menstrual cycle at 11 year of age.

Table 2 shows attitude of girls towards menarche. 35(43.75%) were prepared for menstruation mentally, Accepted it as physiological process but 30% had feeling of embarrassment & panic situation. 10(12.5%) girls had fear & 5(6.25% girls) were used to get irritated by monthly bleeding

Table 3 shows 55 (68.75%) girls having irregular bleeding pattern. In 37.5% girl's menses pattern was after every 30-35 days. In 44% bleeding remain for 3 days & amount of flow was heavy in 9%, moderate in 86% & scanty in 5 % (Table 4, 5, 6).

Dysmenorrhea was present in 41(52%) girls, 10(1.25) girls had it since menarche. 40% girls had dysmenorrhea on 1st day, 27% have premenstrual symptoms. (Table 7, 8)

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Premenstrual symptoms were present in 51(64%). Bloating was most common symptom followed by irritability (table 9, 10). 75% girls were not interested in studying during menses. 85% girls were able and allowed to do their routine work during menses (table 11, 12).

DISCUSSION: Menarche is a step towards maturation in reproductive life of girls. This is affected by genetics, nutrition, ethnicity, stress.

During initial years following menarche menses remain irregular due to immaturity of HPO axis. As there is increasing trend towards some adolescent disorder like PCOD, irregular menstrual pattern must be evaluated before declaring this as physiological.

In our study mean age of menarche was 11 years.

The mean age of menarche was 13.6.² In another study in rural Orissa, the mean age of menarche was found to be 12.97 yrs. (S.D. 0.99)³

In a study conducted among tribal Gujar adolescent girls, 9.9 per cent of the subjects had their menstrual cycle between 45-60 days.⁴

Dysmenorrhea and premenstrual symptoms has also been reported to be one of the most frequent causes of absenteeism from school and of days off work.⁵ Women with premenstrual symptoms have reported a greater number of days with impairment in routine work, school and household activities.⁶

Accurate education of the adolescent girl on menstruation is important because some misconceptions exist in the adolescent population about menstruation, some perceive it as a bad or strange thing; others think of it as frightening or an embarrassing experience.

The knowledge of the process of menstruation existed in only a quarter of girls although majority of them were studying in tenth standard.⁷ A study by Kamalam and Rajalakshmi (2005) also found that majority of girls had no knowledge of menstruation, its onset, the reasons for irregular periods and what to do for discomfort during periods.⁸

CONCLUSION: Adolescent girls, constitute an important group of our society. These girls need special care because they give shape to the health and well-being of the present as well as future generations. Adolescent girls suffer some morbidity related to menstruation that makes it necessary for accurate education about menstruation. Young females and their parents should be educated regarding what to expect of a first period and about the range for normal cycle length of subsequent menses. Girls who have been educated about early menstrual patterns will experience less anxiety as development progresses.

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Age of menarche(yrs)	Number	%
9	5	6.25
10	14	17.5
11	36	45
12	14	17.5
13	9	11.25
14	2	2.5
Total	80	100

Table 1: Age at menarche

View	Number	%
Normal change	35	43.75
embarrsement	30	37.5
fear	10	12.5
Irritation	5	6.25
Total	80	100

Table 2: View about menarche

Cycle	Number	%
Reguler	25	31.25
Irregular	55	68.75
total	80	100

Table 3: Regular v/s irregular bleeding pattern

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Days	Number	%
15-20	2	2.5
21-25	6	7.5
26-30	13	16.25
30-35	30	37.5
35-40	15	18.75
40-45	9	11.25
>45	5	6.25
Total	80	100

Table 4: Duration of each cycle in days

Duration (days)	Number	%
2	5	6.25
3	35	43.75
4	20	25
5	12	15
6	5	6.25
More than 1 week	3	3.75
Total	80	100

Table 5: Duration of menstrual flow

day	Number	%
1	15	18.75
2	55	68.75
3	6	7.5
4	4	5
Total	80	100

Table 6: Days of heaviest flow

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Dysmenorrhoea	Number	%
Present	41	51.25
Absent	39	48.75
Total	80	100

Table 7: Dysmenorrhoea

Age of onset of Dysmenorrhoea	Number
Since menarche	10
After 1year	6
After 2year	15
>=3years	10

Table 8: Age of onset of dysmenorrhoea

Day of dysmenorrhoea	Number	%
Premenstrual	22 Congestive	27.5
1 st	32 Congestive	40
2 nd	14 spasmodic	17.5
3 rd	9	11.25
4 th	3	3.75
Total	80	100

Table 9: Distribution according to days

Premenstrual symptoms	number	%
Present	51	64%
Absent	29	36%

Table 10: Premenstrual symptoms

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Symptoms	Number
Breast pain	13
Headache	27
Nausea	10
Mood disorders (Irritability)	38
Bloating	49

Table 11: Premenstrual symptoms

attitude	Number	%
want to do exercise	8	10
any impact of menses over studies	60	75
notice extra wt gain	56	70
Able to do daily work	68	85
Absent from college	12	15

Table 12: Impact of menses on routine

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