

Study of Pattern of Menstrual Disorders in Adolescent Girls at Tertiary Care Centre in Peri-Urban Area of Central India.

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Abstract

Introduction: Adolescence is a period of rapid physical growth, psychological and social changes. This period is also marked by onset of menstruation cycle “Menarche” in adolescent girls. Menstruation is natural, biological process experienced by all adolescent girls and women in reproductive age. Menstrual cycle is characterized by variability in volume, pattern, and regularity. Menstrual disorders and hygiene practices affect mental and physical health i.e. nutrition, educational performance and social behaviour. The objective of the current study was to observe the menstrual disorders among adolescent girls and to observe the demographic profile and assess hygiene practices during menstruation.

Method: The descriptive, prospective study was conducted among 130 adolescent girls attending gynaecology outpatient department at DMMC & SMHRC, Nagpur, India from August 2019 to January 2020. The demographic profile was noted and menstruation history and hygiene practices during menstruation cycle were carefully elicited with the help of semi-

structured questionnaire. Post interview the adolescent girls were counselled regarding proper menstruation hygiene practices and nutrition.

Result: The mean age at menarche in the study subjects was 13.4 ± 0.92 years. The commonest symptoms observed was abdominal pain/cramps during menstruation cycle in 93.1% adolescent girls. Majority of girls had intermenstrual interval of 21-35 days, moderate flow which lasted for 3-5 days. The commonest menstrual disorder was dysmenorrhoea in 3/4th girls. Use of sterile sanitary pads was seen in 83.8% girls, which shows that sanitary pads are accessible and affordable.

Conclusion: Dysmenorrhoea was the commonest cause of morbidity among adolescent girls, which may affect their mental and social wellbeing. This may also result in significant school absenteeism. Though, use of sterile sanitary pads was seen in majority of the girls, hygiene practices may be further improved with the engagement of health care professionals, teachers, and community groups.

Key words: Adolescent girls, Menstruation hygiene, Dysmenorrhoea sterile sanitary pads and health care professionals

Introduction

Adolescence is the phase of life between childhood and adulthood, from ages 10 to 19 years. It is a unique stage of human development and an important time for laying the foundations of good health. Adolescents experience rapid physical, cognitive, and psychosocial growth. In India, adolescents age group (10-19 years) comprise 18% of the total population. [1] Though it is a continuous process, adolescence is generally divided into three phases: early [10-13 years], mid [14-16years] and late [17-19 years] puberty. Puberty is a period during which secondary sex characters begin to develop and the capability of sexual reproduction is attained. [2]

Menstruation is a natural, normal biological process experienced by all adolescent girls and women in reproductive age. Among the developmental milestones associated with the adolescence, menarche i.e., the onset of first menstruation cycle is the most important in girls. Menstruation is the continuous process which occurs once a month as a regular rhythmic period. Throughout the childbearing years of the women, it remains as a normal physiological phenomenon and discontinues permanently at menopause approximately between the ages of 45 to 55 years. [3,4]

During first few years after menarche, menstrual cycle is often irregular. These cycles are generally anovulatory. However, by the age of 17 to 18 years, regular menstrual cycle becomes established. [5] Though, menstruation is asymptomatic bleeding per vagina in majority of girls, some may experience pain in abdomen, gastrointestinal disturbances like anorexia, vomiting, leg pain and back pain. Dysmenorrhoea is a major problem during menstruation, affecting their daily activities including school absenteeism. [6] Though, adolescent girls are sizable population, yet the health of adolescent girls remains largely neglected. The needs of soft-spoken adolescent girls are often ignored. [7] Consequently, health care providers are of immense importance for these adolescent girls who are going through pubertal transition. Health care providers have an opportunity to discuss reproductive health issues with adolescent girls and their mothers. [8]

The current study was carried out study the pattern of menstrual disorders in adolescent girls attending tertiary care centre in peri-urban area of central India.

Objective of the study:

1. To observe the demographic profile of adolescent females attending outpatient department at SHMRC.
2. To study menstrual disorder and pattern among study participants and
3. To assess hygiene practices followed during menstruation.

METHODOLOGY

This descriptive prospective study was conducted in adolescent girls attending gynaecology outpatient department at SMHRC, Wanadongri, Nagpur from August 2019 to January 2020. Ethical clearance was obtained from institutional ethics committee. During the study period, 130 girls visiting OPD for menstrual disorders consented for study participation and were enrolled. The details of parameters related to age; menstruation history & hygiene were recorded in a pre-structured questionnaire. Post interview the adolescent girls were counselled regarding proper menstruation hygiene practices and nutrition.

RESULTS

Adolescent girls age group ranged from 11-19 years. More than 50% of girls belonged to age group 14-16 years, with the mean age of 15.2 ± 1.2 years. The mean age of menarche was 13.4 ± 0.92 years. Majority of girls attained menarche between 12-14 years of age (Table 1).

The inter-menstrual period among majority of girls (70%) was 21-35 days, followed by more than 35 days in 18.5% and less than 21 days in 11.5%. The duration of menstruation cycle was 3-5 days in 78.5% girls., with moderate flow in 67.7% girls (Table 2).

In menstrual symptoms, almost all girls (93.1%) experienced abdominal pain/cramps. Backache (41.5%), body ache (30.8%) & irritability (26.9%) were other common symptoms (Table 3). Table 4 depicts hygienic practices during cycle. Sanitary pads were used by 83.8% girls and remaining girls used both sanitary pads and cloth. Majority of girls (72.3%) changed their absorbent less than 4 times. 3/4th of girls cleaned their genitalia less than 4 times and more than half used soap & water for the same.

The most common presenting complain was dysmenorrhea (74.6%) among adolescent girls. Percentage of menorrhagia, irregular menses and polymenorrhoea was almost equal and ranged from 7.7-9.2% (Table 5).

Table 1. Age variables of adolescent girls (n=130)		
Variable	Age (Years)	Number (%)
Age group	10-13	36 (27.7)
	14-16	71 (54.6)
	17-19	23 (17.7)
Age of menarche	11	4 (3.1)
	12	12 (9.2)
	13	57 (43.8)
	14	42 (32.3)
	15	11 (8.5)

Table 2. Distribution of adolescent girls according to menstrual pattern (n=130)		
Variable		Number (%)
Inter-menstrual interval	Less than 21 Days	15 (11.5)
	21-35 days	91 (70)
	more than 35 days	24 (18.5)
Amount of blood flow	Scanty	7 (5.4)
	Moderate	88 (67.7)
	Heavy	35 (26.9)
Days of blood flow	Less than 3 days	7 (5.4)

	3-5 days	102 (78.5)
	more than 5 days	21 (16.2)

Table 3. Menstrual Symptoms in adolescent girls (n=130)

Symptom	Number	Percent
Body ache	40	30.8
Backache	54	41.5
Abdominal cramps/Pain	121	93.1
Headache	14	10.8
Irritability	35	26.9

Table 4. Menstrual hygiene practices in adolescent girls (n=130)

Type of absorbent	Number	Percent
Only sanitary napkin	109	83.8
Both sanitary napkins & clothes	21	16.2
Absorbent change times		
≥ 4 times	36	27.7
< 4 times	94	72.3
Cleaning of genitalia during last menstrual cycle		
≥ 4 times	32	24.6
< 4 times	98	75.4
Cleaning of genitalia		
Soap & water	72	55.4
Only water	58	44.6

Table 5. Menstrual Disorder in adolescent girls (n=130)

Disorder	Number	Percent
Dysmenorrhoea	97	74.6
Menorrhagia	12	9.2
Irregular menses	11	8.5
Polymenorrhoea	10	7.7

DISCUSSION

The adolescence is a period of transition from puberty to early adulthood, where physical, emotional, and psychological changes occur. Menarche is an important landmark of the adolescence which prepares a girl for the future motherhood. Adolescence girls may have many problems associated with menstrual cycle and may feel shy to discuss among peers or family members, which may affect hygiene practices and overall health.

In the current study, the mean age of menarche in this study was 13.45 \pm 0.95 years, which is similar findings studies conducted in other parts of the country. [9-11]. The average menstrual flow was 4.1 \pm 1.1 days in the present study, other studies have similar findings. [10,12-15]. Inter-menstrual period in the present study was 21-35 days in 70% adolescent girls in the present study. Similar results have been observed in other studies in country. [14-16].

Problems associated with menstruation.

The commonest menstrual symptoms in adolescent girls were abdominal pain/cramps seen in 93.1% girls. Other studies across country have also reported abdominal cramps as commonest symptom, though in lesser frequency. [10,11]. In this study the commonest menstrual disorder seen was dysmenorrhea in 74.6% adolescent girls. The dysmenorrhoea may be either primary or secondary. Primary dysmenorrhea occurs in the absence of any identifiable pathology and is attributed to the production of prostaglandins during the menstrual cycle. Secondary dysmenorrhea occurs when there is an identifiable pelvic or hormonal pathology causing pain. The most common gynaecologic causes of secondary dysmenorrhea are endometritis and pelvic inflammatory disease. These conditions are associated to poor nutrition, poor menstrual hygiene practices and lack of awareness. [13,17]. A similar study done by Sharma S et al. reported 53.5% dysmenorrhoea in 53.5% girls, while Yadav et al reported in 41.6% adolescent girls. [17-20].

In the present study heavy menstrual bleeding rate was observed in 9.2% girls, while the other studies have reported 6.6% to 30.8%. [17,21,22]. Irregular menses was seen among 8.5% girls, which was lesser than other similar studies. [11,23,24]. Few studies have reported results of menorrhagia, polymenorrhoea & irregular cycles during menstruation. [10, 25,26].

Menstruation hygiene practices

The present study revealed that 83.8% adolescent girls were using sterile sanitary pads as an absorbent, whereas 16.2% used cloth and sanitary pads as an absorbent during menstruation cycle. Similar findings have been reported in other studies. [12,16]. The findings varied between urban and rural areas as well as time. In the rural areas, use of sterile sanitary pad was lesser compared to urban settings. [17,27,28]. In rural area, the hygiene practices may have been poor due to various reasons i.e., availability, accessibility, and affordability of sanitary pads. Education status also affects these practices. However, recent studies in urban areas have shown results like the current study. [12].

Cleaning of external genitalia with soap and water was seen among 55.4% girls, which varied between 28.5-63% in various studies. [12, 29,30].

CONCLUSION

The attainment of menarche at appropriate age indicates normal functioning of female reproductive system. The duration blood flow and cycle interval was normal in majority of adolescent girls. Dysmenorrhoea is quite common among the adolescent girls. As majority of adolescent attend either school or college during adolescence, dysmenorrhoea may affect their health and education both. Due to low awareness and open discussion about menstrual cycle at home or school, these girls withstand the pain and other morbidities associated with cycle. Other menstrual morbidities include heavy menstrual bleeding, irregular menses, irritability, and psychological problems.

The use of hygienic sanitary pads as an absorbent was prevalent in majority of adolescents girls, which indicate adoption of good menstruation hygiene practices. However, educating adolescent girls about menstrual health by health professionals and teachers can help in reducing their psychological and physical stress.

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