

Study of Menstrual Problems of Adolescent Girls Attending a Tertiary Care HospitalPratibha Jha¹, Seema²¹Senior Resident, Department of Obstetrics and Gynaecology, Darbhanga Medical College and Hospital, Laheriasarai, Bihar²Professor and Head of Department, Department of Obstetrics and Gynaecology, Darbhanga Medical College and Hospital, Laheriasarai, Bihar

Received: 25-06-2023 / Revised: 28-07-2023 / Accepted: 30-08-2023

Corresponding author: Dr. Pratibha Jha

Conflict of interest: Nil

Abstract:**Background:** Menarche is regarded as a turning point in a girl's growth and development. Menstrual cycle onset age and pattern depend on a variety of variables. Many adolescent females experience dysmenorrhea, heavy bleeding, and irregular menstruation after menarche. The current study's goal was to assess the sociodemographic characteristics of adolescent girls experiencing menstruation issues, as well as the nature of those problems and how they were handled.**Methods:** This retrospective study was carried out at the Department of Obstetrics and Gynaecology, Darbhanga Medical College and Hospital, Laheriasarai, Bihar from September 2020 to August 2021.**Results:** 141 teenage girls with menstruation issues visited our hospital overall. 90 of them (63.8%) were late adolescents, 135 (95.7%) lived in cities, 70 (49.6%) belonged to the middle socioeconomic class, and 126 (89.3%) were single. Amenorrhoea, dysmenorrhoea, and irregular menstrual periods affected 86 (61%) people, 38 (27%) people, and 17 (12%) people, respectively. Patients were treated with appropriate counselling as well as medicinal and/or surgical care.**Conclusion:** In our study, the majority of the adolescent girls were anemic. Therefore, it is essential to educate people on the importance of nutrition, different menstrual disorders, normal physiology, and the prevention and management of anemia.**Keywords:** Adolescent girls, Dysmenorrhea, Menstruation.

This is an Open Access article that uses a funding model which does not charge readers or their institutions for access and distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/4.0>) and the Budapest Open Access Initiative (<http://www.budapestopenaccessinitiative.org/read>), which permit unrestricted use, distribution, and reproduction in any medium, provided original work is properly credited.

Introduction

Adolescence is a transitional period lasting from 10 to 19 years that is marked by quick changes in the body, mind, and sexuality. [1] It exhibits the thelarche, adrenarche, pubarche, and menarche symptoms. Menstruation is a normal occurrence and a key sign of women's health because it reflects their reproductive function. Girls experience a variety of menstrual difficulties as they reach puberty at this age. Teenage girls' menstrual issues have a unique place on the spectrum of gynecological illnesses that affect women of all ages. This is due to the physical nature of the condition, which is extremely particular, special, and age-specific. 75% of girls experience one or more menstrual-related issues. [2]

Materials and Methods

The data for this retrospective study was collected from the OPD registration and hospital records between September 2020 and August 2021 at the Department of Obstetrics and Gynecology,

Darbhanga Medical College and Hospital, Laheriasarai, Bihar. By using the proper statistical methods, data was analyzed.

Both registered participants and those in emergencies made up the study population. Age, education, place of residence, socioeconomic status, type of complaints made, menstruation problem type, and management information were obtained from patients' socio-demographic data.

This study comprised 141 adolescent girls, aged 10 to 19, who visited the OPD or were hospitalized to the gynaecology department for menstrual difficulties. Girls in their adolescence with other gynaecological issues were not included.

Results

We have collected data of 141 adolescent girls, who had presented with menstrual problems at DMCH, Laheriasarai, Bihar from the study period September 2020 to August 2021.

Table 1: Socio-demographic details (n=141)

Socio-demographic details	No. of Adolescent girls	Percentage (%)
Age (years)		
<input type="checkbox"/> Early adolescent (10-13)	14	9.9%
<input type="checkbox"/> Mid adolescent (14-16)	37	26.2%
<input type="checkbox"/> Late adolescent (17-19)	90	63.8%
Residential area		
<input type="checkbox"/> Urban	135	95.7%
<input type="checkbox"/> Rural	6	4.2%
Socio-economic class		
<input type="checkbox"/> Low	62	43.9%
<input type="checkbox"/> Middle	70	49.6%
<input type="checkbox"/> High	9	6.3%
Marital status		
<input type="checkbox"/> Unmarried	126	89.3%
<input type="checkbox"/> Married	15	10.6%

According to Table 1, the age group of late teenage females, between the ages of 17 and 19, had the highest percentage of adolescent girls with menstrual issues, at 90 (63.8%). 95.7% of the 135 teenage girls with menstrual issues were from urban backgrounds. The proportion of adolescents experiencing menstruation issues ranged from 9 (6.3%), in the upper socioeconomic groups, to 70 (49.6%), in the medium socioeconomic classes. 126 of them, or 89.3%, were single.

Table 2: Types of menstrual problems (n=141)

Menstrual Problems	No. of Adolescent girls	Percentage (%)
Dysmenorrhea	86	61.0%
Menstrual irregularity	38	27.0%
Amenorrhoea	17	12.0%
Total	141	100.0%

As seen in Table 2, dysmenorrhoea (86%) and amenorrhoea (12%) were the three most common types of menstrual irregularities. All of the menstrual issues were more common, but dysmenorrhoea was the most common.

Table 3: Types of dysmenorrhea (n=86)

Dysmenorrhea	No. of Adolescent girls	Percentage (%)
Primary	41	47.7%
Secondary	45	52.3%
<input type="checkbox"/> Ovarian cyst	24(27.9%)	
<input type="checkbox"/> Polycystic Ovarian Syndrome	12(14.0%)	
<input type="checkbox"/> PID	7(8.1%)	
<input type="checkbox"/> Congenital anomalies of reproductive tract	2(2.3%)	
Total	86	100.0%

According to Table 3, of the 86 teenage girls who had dysmenorrhoea, 41 (47.7%) and 45 (52.3%), respectively, had primary dysmenorrhoea and secondary dysmenorrhoea. Secondary dysmenorrhoea was caused by ovarian cysts in 24 (27.9%) of the cases, PCOS in 12 (14%) of the cases, PID in 7 (8.1%) of the cases, and congenital defects of the reproductive system in 2 (2.3%) of the adolescent girls.

Table 4: Types of menstrual irregularity in adolescent girls (n=38)

Menstrual Irregularity	No. of Adolescent girls	Percentage (%)
Heavy menstrual bleeding (HMB)	22	57.9%
Infrequent menstrual bleeding	8	21.1%
Light menstrual bleeding	6	15.8%
Frequent menstrual bleeding	2	5.2%
Total	38	100.0%

According to Table 4, of the 38 adolescent girls with menstrual irregularities, 22 (57.9%) had heavy menstrual bleeding, 8 (21.1%) had infrequent menstrual bleeding, 6 (15.8%) had light menstrual bleeding, and 2 (5.2%) had frequent menstrual bleeding.

Table 5: Causes of amenorrhoea in adolescent girls (n=17)

Amenorrhoea	Number	Cause	No. (%)
Primary	7 (41.2%)	<input type="checkbox"/> Imperforate hymen	4(57.1%)
		<input type="checkbox"/> Mayer Rokitansky Kuster Hauser Syndrome(MRKH)	1(14.3%)
		<input type="checkbox"/> Cervical agenesis	1(14.3%)
		<input type="checkbox"/> High vaginal septum	1(14.3%)
Secondary	10 (58.8%)	<input type="checkbox"/> PCOS	6(60.0%)
		<input type="checkbox"/> Stress	3(30.0%)
		<input type="checkbox"/> Hypothyroidism	1(10.0%)
Total	17 (100.0%)		

According to Table 5, of the 17 teenage girls who had amenorrhoea, 7 (41.2%) of them also had primary amenorrhoea. 4 (57.1%) of the girls had imperforate hymen, 1 (14.3%), Mayer Rokitansky Kuster Hauser syndrome (MRKH), 1 (14.3%), a high vaginal septum, and 1 (14.3%), cervical agenesis. Ten (58.8%) adolescent girls had secondary amenorrhoea. Six of the girls (60%) had polycystic ovarian syndrome (PCOS), three (30%) had psychological stress, and one (10%) had hypothyroidism.

Table 6: Severity of anaemia and socio-economic status in adolescent girls (n=91)

Severity of Anaemia	Socio-economic status			
	High Numbers (%)	Middle Numbers (%)	Low Numbers (%)	Total Numbers (%)
Mild	6(6.5%)	24(26.4%)	24(26.4%)	54(59.3%)
Moderate	1(1.1%)	10(11.0%)	19(20.9%)	30(33.0%)
Severe	1(1.1%)	2(2.2%)	4(4.4%)	7(7.7%)
Total	8(8.7%)	36(39.6%)	47(51.7%)	91(100.0%)

Table 6 reveals that 91 (64.5%) of the 141 adolescent girls were anemic. There were 54 (59.3%), 30 (33%) and 7 (7.7%) individuals with mild, moderate, and severe anemia, respectively. Out of these, 83 (91.2%) belonged to the middle and lower social classes. Eight of the nine teenage girls in the high socioeconomic level were anemic.

Discussion

The majority of the adolescent girls in the current study, 90 (63.8%), were between the ages of 17 and 19, which is late adolescence. 135 (95.7%) of the girls lived in urban areas, and 70 (49.5%) belonged to the middle socioeconomic class. According to Varghese L. et al. [3], the majority of adolescent females with menstrual issues, 177 (50.5%), were in the mid-adolescent group of 15–16 years, 266 (76%) lived in an urban location, and 275 (78.6%) belonged to a middle socioeconomic class.

In the current study, 91 (64.5%) of the 141 females were anemic. The percentages of people with mild, moderate, and severe anemia were 54 (59.3%), 30, and 7, respectively. According to Thaker RV et al., anemia affected 62.7% of teenage girls, with mild, moderate, and severe anemia affecting 51.7%, 32.6%, and 15.7% of them, respectively. In adolescent girls aged 15 to 19 who lived in urban and rural areas, the prevalence of anemia was 63% and 72.3%, respectively, according to NFHS-5. [5]

Out of 91 females who were anemic in the current study, 47 (51.6%) belonged to a lower socioeconomic class and 8 (8.7%) to a higher socioeconomic class, meaning that 8 of the 9 adolescent girls in the high socioeconomic class were anemic. High socioeconomic classes have

plenty of food available, but there is a relative lack of knowledge about the nutritional value of food and healthy eating practices. Blood transfusions were provided to seven adolescent girls who had severe anaemia brought on by AUB. Iron supplementation, dietary changes, and counseling were used to treat adolescent girls with mild to moderate anemia. Menstrual irregularities (38%) and dysmenorrhoea (86%) as well as amenorrhoea (12%) were all present in the current investigation. Menstrual issues were reported by 60% of women in Goswami P et al [6]. 95.8% of girls had menstrual issues, according to Thaker RV et al. Dysmenorrhoea was reported by Archana R et al [7] in 32.5% of cases.

Primary dysmenorrhoea and secondary dysmenorrhoea were present in 41 (47.3%) and 45 (52.3%) of the 86 teenage girls in the current study who had dysmenorrhoea, respectively. Secondary dysmenorrhoea was caused by ovarian cysts in 24 (27.9%) of the cases, PCOS in 12 (14%) of the cases, PID in 7 (8.1%) of the cases, and congenital defects of the reproductive system in 2 (2.3%) of the adolescent females. Teenage girls with PCOS must be treated using a multidisciplinary strategy that includes weight loss, exercise, lifestyle modifications, and medication. [8] Adolescent girls who were treated with antibiotics, analgesics, and advice to maintain personal cleanliness all had PID in 7 (8.1%) of them.

In the current study, 38 (or 27%) adolescent girls had irregular periods. Of these, 22 (57.9%) experienced severe menstrual flow, compared to 8 (21.1%) who had irregular periods, 6 (15.8%) who had light periods, and 2 (5.2%) who had frequent

periods. Goswami P et al. [6] observed that 2.2% of girls had light menstrual bleeding and 55.6% of them had HMB. Thirty (78.9%) patients received hormonal therapy in addition to tranexamic acid/NSAID and anemia treatment. According to Bhalerao-Gandhi et al [9], 66% of girls needed hormonal treatment.

Seven (41.2%) of the 17 adolescent girls in the current study who had amenorrhoea had primary amenorrhoea. Four of them (57.1%) girls had imperforate hymens, one (14.3%) had cervical stenosis, one (14.3%) had MRKH syndrome, and one (14.3%) had a high vaginal septum. Primary amenorrhoea was documented by Goswami P et al. [6] in 3 (27.3%) adolescent girls, of whom 1 (33.3%) had an imperforate hymen and 2 (66.6%) had vaginal agenesis. 7 (4.9%) adolescent girls required surgical intervention.

The hematocolpos of four girls with imperforate hymen were drained. Surgery was used to treat one girl who had a high vaginal septum, and the septum was removed. Two-stage surgery was used to treat a girl who had cervical agenesis; the first stage involved an examination under anesthesia (EUA) and a diagnostic laparoscopy. A silicone cannula was placed into the lower uterine cavity during the second step of laparotomy to preserve the passage.

Both patients now menstruate naturally as a result of their excellent treatments. In one adolescent girl with MRKH syndrome, vaginoplasty was suggested. Bhalerao-Gandhi et al [9] reported that 4% of females underwent surgical intervention.

In the current study, 6 (60%) of the 10 adolescent girls with secondary amenorrhoea also had PCOS, 3 (30%) experienced test stress, and 1 (10%) had hypothyroidism. Goswami P et al. (2006) observed secondary amenorrhoea in 8 (72.7%) teenage girls, 6 (75%), PCOS, 1 (12.5%), and TB abdomen in 1 (12.5%) of these girls. Teenage ladies with PCOS received advice on changing their lifestyles and losing weight. Three girls who experienced exam stress were treated through counselling, and one girl who had hypothyroidism was referred to a doctor and started on therapy.

Conclusion

Dysmenorrhoea, irregular periods, and amenorrhoea are the most prevalent menstrual issues in adolescent girls. Menstrual issues should be managed along with appropriate counselling and education regarding the anatomy and physiology of the human reproductive tract.

In our study, the majority of the adolescent girls were anemic. Therefore, it's important to promote health awareness about the value of diet combined with the prevention and management of anemia.

References

1. Available from: https://www.who.int/health-topics/adolescent-health#tab=tab_1.
2. Available from: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6132001/>.
3. Varghese L, Prakash PJ, Vishwanath L. A Study to Identify the Menstrual Problems and Related Practices among Adolescent Girls. *J South Asian Fed Obstet Gynaecol*. 2019; 11(1):13–6.
4. Thaker RV, Madiya AB, Chaudhari HD, Maru JD, Baranda SB. Health Profile of Adolescent Girls Visiting Obstetrics and Gynaecology Department of Tertiary Care Hospital. *Int J Reprod Contracept Obstet Gynecol*. 2018;7(11):4678–683.
5. Available from: http://rchiips.org/NFHS/NFHS-5_FCTS/FactSheet_GJ.pdf.
6. Goswami P, Airward G, Mishra P, Agrawal V. Adolescent Gynaecological Problems: A Prospective Study. *J Evol Med Dent Sci*. 2015; 102(4):16709–12.
7. Archana R, Rohidas C. Gynaecological problems of adolescent girls attending outpatient departments at tertiary care centres with evaluation of cases of puberty menorrhagia requiring hospitalization. *J Obstet Gynaecol India*. 2016; 66(S1):400–6.
8. Dutta DC. Amenorrhoea. In: *Textbook of Gynaecology*. New Delhi: Jaypee Brothers Medical; 2016. p. 382.
9. Bhalerao-Gandhi A, Vaidya R, Bandi F. Managing Gynaecological Problems in Indian Adolescent Girls-A Challenge of the 21st Century. *Obstet Gynecol Int J*. 2015; 3(1):70.