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Indian Journal of Obstetrics and Gynecology Research

Journal homepage: [www.ijogr.org](http://www.ijogr.org)

## Original Research Article

# Menstrual problems of adolescent girls attending urban tertiary care hospital: One-year study

Dipti Vasava<sup>1</sup>, Foram Patel<sup>1</sup>, Aditi Tyagi<sup>1</sup>, Gautam Gavaniya<sup>1</sup>, Dhruvi Dadhaniya<sup>1</sup>, Rajal Thaker<sup>1,\*</sup>

<sup>1</sup>Dept. of Obstetrics and Gynaecology, Smt. N H L Municipal Medical College, Ahmedabad, Gujarat, India



## ARTICLE INFO

## Article history:

Received 13-08-2021

Accepted 02-11-2021

Available online 14-02-2022

## Keywords:

Adolescent  
Amenorrhoea  
Anaemia  
Dysmenorrhoea  
Menstrual problems

## ABSTRACT

**Introduction:** Many adolescent girls with menstrual disturbances never present to their family doctor or gynaecologist due to embarrassment about discussing menstruation and fear of disease. This may lead to delayed presentation. The objective of the current study was to evaluate the socio-demographic aspects of adolescent girls having menstrual problems as well as type of menstrual problems and its management.

**Materials and Methods:** This retrospective study was carried out at the department of obstetrics and gynaecology of tertiary care teaching hospital from July 2019 to July 2020.

**Results:** Total of 141 adolescent girls visited our hospital with menstrual problems. Amongst them 90(63.8%) belonged to the late adolescent group, 135(95.7%) were residing at urban areas, 70(49.6%) were from middle socio-economic class and 126(89.3%) were unmarried. Dysmenorrhoea, menstrual irregularities and amenorrhoea were present in 86(61%), 38(27%) and 17(12%) respectively. Patients were managed either medical and/or surgical management along with proper counselling.

**Conclusion:** Majority of the adolescent girls in our study were anaemic. Hence, prevention and management of anaemia along with health education regarding normal physiology, various menstrual problems and importance of nutrition is necessary. In India attempts and success to develop adolescent friendly health services in public and private systems have met with partial success. Hence, counselling and management of menstrual problems in adolescents needs to be provided in existing health and medical care services.

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## 1. Introduction

Adolescence is a transitional stage extending from 10-19 years characterized by rapid physical, psychological and sexual changes.<sup>1</sup> It is characterized as thelarche, adrenarche, pubarche and menarche. Menstruation is a natural phenomenon and an important indicator of women's health reflecting their reproductive function. As girls attain puberty at this age, they have various problems associated with menstruation. Menstrual problems of adolescents occupy a special space in the spectrum of gynaecological

disorders of all ages. This is because of the physical nature of the problems, which are so unique, special, and specific for the age group. 75% of girls have one or more problems associated with menstruation.<sup>2</sup>

## 2. Materials and Methods

After due permission from institutional review board of our institute, this retrospective study was carried out at department of obstetrics and gynaecology of tertiary care teaching hospital during July 2019 to July 2020 and data was collected from the OPD books, case papers and also from records of the hospital. Data was analysed by

\* Corresponding author.

E-mail address: [drrajalthaker@gmail.com](mailto:drrajalthaker@gmail.com) (R. Thaker).

appropriate statistical tools.

The study population included emergency as well as registered ones. Patients' Socio-demographic details like age, education, residence, socio-economic class, presenting complaints, type of menstrual problems and details of management were collected.

### 2.1. Inclusion criteria

1. All the adolescent girls aged 10-19 years who attended OPD and/or were admitted under the gynaecology department for menstrual problems.

### 2.2. Exclusion criteria

1. Adolescent girls having other gynaecological problems were excluded.

## 3. Results

We have collected data of 141 adolescent girls, who had presented with menstrual problems at our tertiary care hospital during the study period.

**Table 1:** Socio-demographic details (N=141)

Socio-demographic details	Numbers	Percentage (%)
<b>Age (years)</b>		
Early adolescent (10-13)	14	9.9
Mid adolescent (14-16)	37	26.2
Late adolescent (17-19)	90	63.8
<b>Residential area</b>		
Urban	135	95.7
Rural	6	4.2
<b>Socio-economic class</b>		
Low	62	43.9
Middle	70	49.6
High	9	6.3
<b>Marital status</b>		
Unmarried	126	89.3
Married	15	10.6

As shown in Table 1 the maximum percentage of adolescent girls, 90(63.8%) having menstrual problems belonged to the late adolescent age group of 17-19 years. Majority of adolescent girls 135(95.7%) having menstrual problems were from urban background. The proportion of adolescent menstrual problems was highest, 70(49.6%) among middle socio-economic class and lowest, 9(6.3%) among high socio-economic classes. Majority of them 126(89.3%) were unmarried.

As shown in Table 2, menstrual problems were in the form of dysmenorrhoea in 86(61%), menstrual irregularity in 38(27%) and amenorrhoea in 17(12%). Dysmenorrhoea was more prevalent amongst all the menstrual problems.

As shown in Table 3, out of 86 adolescent girls who had dysmenorrhoea, primary dysmenorrhoea and secondary

**Table 2:** Types of menstrual problems (N=141)

Menstrual Problems	Numbers	Percentage (%)
Dysmenorrhoea	86	61
Menstrual irregularity	38	27
Amenorrhoea	17	12
Total	141	100

dysmenorrhoea were present in 41(47.7%) and 45 (52.3%) girls respectively. The causes of secondary dysmenorrhoea were ovarian cyst in 24(27.9%) PCOS in 12(14%), PID in 7(8.1%) and congenital anomalies of the reproductive tract in 2 (2.3%) adolescent girls.

As shown in Table 4, out of 38 adolescent girls having menstrual irregularities, heavy menstrual bleeding was present in 22 (57.9%), infrequent menstrual bleeding was present in 8(21.1%), light menstrual bleeding was present in 6(15.8%) and frequent menstrual bleeding was present in 2(5.2%) adolescent girls.

As shown in Table 5, out of 17 adolescent girls, who had amenorrhoea, primary amenorrhoea was present in 7(41.2%) adolescent girls. Out of these, 4 (57.1%) girls had imperforate hymen, 1(14.3%) had Mayer Rokitansky Kuster Hauser syndrome (MRKH), 1(14.3%) had high vaginal septum and 1(14.3%) had cervical agenesis. Secondary amenorrhoea was present in 10(58.8%) adolescent girls. Out of them, Polycystic Ovarian Syndrome (PCOS) was present in 6(60%) girls, psychological stress in 3(30%) girls, and 1(10%) girl was diagnosed with hypothyroidism.

As shown in Table 6, out of 141 adolescent girls, 91(64.5%) were anaemic. Mild, moderate and severe anaemia were present in 54 (59.3%), 30 (33%) and 7 (7.7%) respectively. Out of these 83(91.2%) were from middle and low socio-economic class. Out of 9 adolescent girls of high socio-economic class, 8 girls were anaemic.

## 4. Discussion

In the present study, the majority of the adolescent girls, 90 (63.8%) having menstrual problems were in the late adolescence age group of 17-19 years, majority of girls were residing in the urban area 135(95.7%) and 70(49.6%) were from middle socio-economic class. Varghese L et al<sup>3</sup> has reported that the maximum number that is 177(50.5%) of adolescent girls having menstrual problems were in the mid adolescent group of 15-16 year, 266(76%) girls were residing in urban area and 275(78.6%) girls belonged to middle socio-economic class.

In present study, out of 141 girls, 91 (64.5%) adolescent girls were anaemic. Mild, moderate and severe anaemia were 54(59.3%), 30(33%) and 7(7.7%) respectively. Thaker RV et al<sup>4</sup> had reported anaemia in 62.7% adolescent girls and mild, moderate and severe anaemia was present in 51.7%, 32.6% and 15.7% respectively. According to NFHS-5 the prevalence of anaemia in adolescent girls aged 15-

**Table 3:** Types of dysmenorrhoea in adolescent girls (N=86)

Dysmenorrhoea		Numbers	Percentage(%)
Primary		41	47.7
Secondary	Ovarian cyst	24 (27.9)	52.3
	Polycystic Ovarian Syndrome (PCOS)	12(14)	
	PID	7(8.1)	
	Congenital anomalies of reproductive tract	2(2.3)	
Total		86	100

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

Menstrual Irregularity	Numbers	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

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

Amenorrhoea	Number	Cause	Numbers	Percentage (%)
Primary	7(41.2%)	Imperforate hymen	4	57.1%
		Mayer Rokitansky Kuster Hauser syndrome (MRKH)	1	14.3%
		Cervical agenesis	1	14.3%
		High vaginal septum	1	14.3%
Secondary	10(58.8%)	PCOS	6	60%
		Stress	3	30%
		Hypothyroidism	1	10%
Total	17		100	

**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%)	19(20.9%)	30(33%)
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%)

19 residing in urban and rural area were 63% and 72.3% respectively.<sup>5</sup>

In the present study, out of 91 girls who were anaemic, 47(51.6%) belonged to lower socio-economic class and 8 (8.7%) belonged to higher socio-economic class, ie out of 9 adolescent girls of high socio-economic class, 8 girls were anaemic. Despite having an abundance of food availability in high socio-economic class, there is a relative lack of awareness regarding the nutritive value of food and healthy eating habits. Seven adolescent girls having severe anaemia due to AUB were given blood transfusions. Adolescent girls having mild and moderate anaemia were managed by iron supplements, diet and counselling.

In present study, menstrual problems were in form of dysmenorrhoea in 86(61%), menstrual irregularity in 38(27%), and amenorrhoea in 17(12%) Goswami P et al<sup>6</sup> has reported menstrual problems in 60%. Thaker RV et al<sup>4</sup>

had reported menstrual problems in 95.8% girls. Archana R et al<sup>7</sup> have reported dysmenorrhoea in 32.5%.

In the present study, out of 86 adolescent girls who had dysmenorrhoea, primary dysmenorrhoea and secondary dysmenorrhoea were present in 41(47.7%) and 45 (52.3%) girls respectively. The causes of secondary dysmenorrhoea were ovarian cyst in 24(27.9%) PCOS in 12(14%), PID in 7(8.1%) and congenital anomalies of the reproductive tract in 2 (2.3%) adolescent girls. Multidisciplinary approach is required to treat adolescent girls having PCOS such as weight reduction, exercise, lifestyle changes and medication.<sup>8</sup> PID was present in 7(8.1%) adolescent girls who were treated by antibiotics, analgesics and were advised to maintain personal hygiene.

In present study, menstrual irregularities were present in 38(27%) adolescent girls. Out of these 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. Goswami P et al<sup>6</sup> have reported HMB in 55.6% and light menstrual bleeding in 2.2% girls. Hormonal treatment was given to 30(78.9%) in addition to tranexamic acid/NSAID and correction of anaemia. Bhalerao-Gandhi A et al<sup>9</sup> reported that hormonal treatment was required in 66% girls.

In the present study, out of 17 adolescent girls, who had amenorrhoea, primary amenorrhoea was present in 7(41.2%). Out of these, 4(57.1%) girls had imperforate hymen, 1(14.3%) girl had MRKH syndrome, 1(14.3%) girl had high vaginal septum and 1 (14.3%) girl had cervical stenosis. Goswami P et al<sup>6</sup> have reported primary amenorrhoea in 3 (27.3%) adolescent girls, out of these 1(33.3%) girl had imperforate hymen and 2(66.6%) girls had vaginal agenesis. Surgical intervention required in 7(4.9%) adolescent girls. Drainage of hematocolpos was done in 4 girls, who had imperforate hymen. In one girl who had high vaginal septum, surgical management was performed and septum was resected. One girl, who had cervical agenesis, was managed by two-stage surgery where in first stage examination under anaesthesia (EUA) and diagnostic laparoscopy was done. In the second stage, laparotomy was done and a silicone cannula was inserted in the lower uterine cavity to maintain the passage. Both patients had successful results and now menstruate normally. Vaginoplasty was advised in 1 adolescent girl who had MRKH syndrome. Bhalerao-Gandhi A et al<sup>9</sup> had reported surgical intervention in 4% girls.

In the present study, out of 10 adolescent girls of secondary amenorrhoea, 6(60%) adolescent girls had PCOS, 3(30%) girls had stress of exams and 1(10%) girl had hypothyroidism. Goswami P et al<sup>6</sup> have reported secondary amenorrhoea in 8(72.7%) adolescent girls, out of these 6(75%) adolescent girls had PCOS, 1(12.5%) girl had hypothyroidism and 1(12.5%) had TB abdomen. Adolescent girls, who had PCOS, were counselled regarding lifestyle modification and weight reduction. 3 girls presented with stress of exam were managed by counselling and one girl who had hypothyroidism was referred to the physician and treatment was started.

## 5. Conclusion

The commonest menstrual problems in adolescent girls are dysmenorrhoea, menstrual irregularities and amenorrhoea. Management of menstrual problems along with proper counselling and education regarding anatomy and physiology of the human reproductive tract should be done.

Many adolescent girls are still shy and unwary of attending the adult outpatient clinic. Special clinics, specialized in adolescent counselling and health education, may go a long way in taking care of their needs. In India attempts and success to develop adolescent friendly

health services in public and private systems have met with partial success. Hence, counselling and management of menstrual problems in adolescents needs to be provided in existing health and medical care services. Majority of the adolescent girls in our study were anaemic. Hence, prevention and management of anaemia along with health education regarding importance of nutrition is necessary.

## 6. Source of Funding

No funding sources

## 7. Conflict of Interest

The authors declare no conflict of interest.

## Acknowledgments

Authors would like to thank the Superintendent of SCL Hospital and Dean of Smt. NHL Municipal Medical College.

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## Author biography


**Dipti Vasava**, Resident

**Foram Patel**, Resident  <https://orcid.org/0000-0002-9441-302X>

**Aditi Tyagi**, Resident

**Gautam Gavaniya**, Resident

**Dhruvi Dadhaniya**, Resident

**Rajal Thaker**, Professor  <https://orcid.org/0000-0002-5477-8112>

**Cite this article:** Vasava D, Patel F, Tyagi A, Gavaniya G, Dadhaniya D, Thaker R. Menstrual problems of adolescent girls attending urban tertiary care hospital: One-year study. *Indian J Obstet Gynecol Res* 2022;9(1):1-5.