

DOI: <https://dx.doi.org/10.18203/2320-1770.ijrcog20230132>

Original Research Article

## Health problems in adolescent girls

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**Received:** 13 December 2022

**Revised:** 16 January 2023

**Accepted:** 17 January 2023

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### ABSTRACT

**Background:** Adolescents form precious human resources in every country, constitutes large number of populations. Adolescence is a period of rapid physical growth, sexual and psychological changes. The aim of the study is to assess the health problems in Adolescent girls and to take measures to prevent and treat their health problems.

**Methods:** This prospective study was conducted from October 2014 to September 2016 in Hindu Rao hospital, North DMC medical college. Patients attending to gynecological outpatient department included in this study. The Statical analysis was done by using Microsoft excel.

**Results:** Majority of patients in our study belongs to 15 to 19 years. Menstrual dysfunction (67.7%) is the most common complaint followed by leucorrhoea (14.1%) and infections (10.6%).

**Conclusions:** Adolescence girls presented with various gynaecological problems in our study. Setting up adolescent friendly clinics and privacy to discuss their problems is desirable for early diagnosis and management.

**Keywords:** Menorrhagia, Leucorrhoea, DUB

### INTRODUCTION

Adolescence is a phase of extensive physical, psychological, and social behavioural changes that occur during 10-19 years of age. Adolescents constitute over 21.4% of population in India.<sup>1</sup> Adolescence period is further divided into 3 phases: Early (10 to 14 yr): Spurt of growth & Onset of secondary sexual characteristics, middle (15 to 17 year): independence and separate identity from parents. New relationship, experimentation with themselves and life and late (18 to 19 year): fully developed physical and sexual characters. Well-formed opinions and ideas.<sup>2</sup> Adolescence refers to the whole period of the time during which secondary sexual characteristics develop, menstruation begins in girls and psychosexual outlook of human being changes. Menstruation is influenced by several factors like genetics, nutrition, body weight and maturation of HPA axis. Early

menstrual cycles in majority are anovulatory and are associated with menstrual irregularities.<sup>3</sup> It may takes 5 to 8 years to settle down menstrual irregularities. It is the common symptom with which patient present to adolescent clinics. Adolescent population come under more neglected group. So, the present study attempts to evaluate all gynaecological problems in adolescent girls attending to gynaecological out patient department.

### METHODS

A prospective observational study was conducted in Hindu Rao Hospital and North DMC Medical College, Delhi from October 2014 to September 2016. After informed consent, 226 adolescent girls between the age 11-19 years attending to gynae OPD were included in this study. Prolonged medical illness and surgical illness were excluded from the study. With proper privacy history was

taken. Detailed general physical examination done. Weight, height, BMI were taken. Investigations like complete hemograms, thyroid profile, coagulation profile, hormonal assay (FSH, LH), abdomen & pelvic ultrasound were done according to the patient.

#### Sample size and statistical analysis

Since this is time bound study (October 2014 to September 2016) we have decided to conduct this study with the sample size of convenience i.e., adolescent girls attended to Gynae OPD during the period of study. The statistical analysis in this study was done by using Microsoft Excel.

## RESULTS

In these 226 adolescent girl's majority populations belong to 15-19 years (79.2%) (Table 1).

**Table 1: Age distribution of adolescent girls in present and other study.**

Age (years)	Present study (n=226) Frequency (%)	Jain et al (n=240) Frequency (%)
10 to 14	47 (20.8)	11 (5)
15 to 19	179 (79.2)	229 (95)

Majority of adolescent girls had normal BMI 144 (63.7%), 58 (25.7%) girls had more than 25 BMI & 24 (10.6%) fall below 18.5 BMI (Table 2).

**Table 2: Comparison of BMI of adolescent girls in present and other study.**

BMI	Present study (n=226) Frequency (%)	Shanti et al (n=48) Frequency (%)
>25	58 (25.7)	12 (25)
18.5 to 24.9	144 (63.7)	18 (37.5)
<18.5	24 (10.6)	18 (37.5)

In our study maximum girls attained menarche at 10 to 12 years 116 (51.3%), 74 (32.7%) attained around 9 to 10 years & 36 (16%) girls attained at 12 to 14 years (Table 3).

**Table 3: Age of menarche in present study and other study.**

Age of menarche (years)	Present study (n=226) Frequency (%)		Shanti et al (n=48) Frequency (%)	
	N	%	N	%
9 to 10	74	32.7	8	17
10 to 12	116	51.3	14	29
12 to 14	36	16	26	54

**Table 4: Various gynaecological problems in present study.**

Gynaecological problems	Present study (n=226) Frequency (%)	
Menstrual disorders	153	67.7
Leucorrhoea	32	14.1
Infections	24	10.6
Ovarian cyst	16	7.07
Others (vulval growth)	1	0.44

Majority were suffering from menstrual problems 153 (67.7%) followed by leucorrhoea 32 (14.1%). 24 (10.6%) infections, ovarian cyst 16 (7.07%). Others 1-vulval fibro epithelial polyp (0.44%) (Table 4). In menstrual problems group out of 153, 43 (28.10%) given history of menorrhagia, 62 (40.52%) complained of dysmenorrhoea, 38 (24.83%) secondary amenorrhoea and 6 (3.92%) presented with primary amenorrhoea (Table 5).

**Table 5: Comparison of menstrual problems in present and other study.**

Menstrual disorders	Present study (N=153) Frequency (%)		Nandita et al (N=86) Frequency (%)	
	N	%	N	%
DUB	43	28.10	55	63.95
Dysmenorrhoea	62	40.52	20	12.79
Primary amenorrhoea	6	3.92	6	6.97
Secondary amenorrhoea	38	24.83	5	5.81

**Table 6: Degree of anaemia in present and other study.**

Degree of anaemia (g/dl)	Present study (N=43) Frequency (%)		Rathod et al (N=17) Frequency (%)	
	N	%	N	%
<5	11	25.5	7	41.17
5 to 7	18	41.8	9	52.94
8 to 9	14	32.5	1	5.88

After investigating 43 girls in menorrhagia group, we came to a diagnosis of dysfunctional uterine bleeding in 36 (83.7%) and 7 (16.3%) having hypothyroidism. In menorrhagia group out of 43 girls 8 girls (18.6%) had haemoglobin less than 5 gm%, 16 (37.2%) had haemoglobin 5-7 gm%, 19 (44.1%) had 8-9 gm% (Table 6). In our study 6 girls presented with primary amenorrhoea out of those 3 girls (50%) was diagnosed as imperforate hymen and 3 (50%) as vaginal atresia. In our study 16 girls presented with ovarian cyst out of those 15 girls (93.75%) had simple ovarian cyst and 1 girl (6.25%) had dermoid cyst. 24 girls are presented with infections, majority had

urinary tract infection 22 (91.67%) and 2 (8.33%) had Bartholin cyst.

## DISCUSSION

In our study we observed that the number of adolescent girls attended to gynaecological clinics are around 1.85%. The lesser incidence is because of unawareness of management of gynaecological problems in this age group. We have done thalassemia screening of all the girls attended to our clinic only one patient having thalassemia trait. As shown in (Table 1) majority of girls fall in 15 to 19 years group, our patients age distribution is comparable with Jain et al, BMI of present study is comparable with Shanti et al.<sup>4,5</sup> 74 girls attained menarche before 10 years, are comparable to Shanti et al.<sup>5</sup> Good nutrition and sedentary life style may be a reason for early menarche, further study may be needed in large number. Girls presenting with various complaints are comparable with Goswami et al.<sup>6,7</sup> As shown in (Table 5) menstrual problems are comparable with Nandita et al.<sup>8</sup> As shown in (Table 6) menorrhagia group 24 girls required hospitalisation for correction of anaemia, 8 girls required 2 or more transfusions, 16 girls required 1 or more blood transfusion. After blood transfusions haemoglobin build up by injectable iron preparations. Menorrhagia was treated by norethisterone, tranexamic acid given. 19 girls received oral iron preparation, tranexamic acid and nonsteroidal anti-inflammatory agents. Similar results observed with Rathod et al.<sup>9</sup> 32 girls presented with leucorrhoea in these 29 (90.6%) having physiological leucorrhoea, they are responded to personal hygiene and counselling, 3 responded to antibiotic therapy, 24 girls fall in infection group out of these 22 presented with urinary complaints in these only 5 patient urine culture is positive treated according to sensitivity test, rest relieved by empirical treatment, 2 presented with Bartholin cyst. Most of the girls found to have functional ovarian cyst 15 and 1 had dermoid cyst. During childhood and adolescence Functional cysts are the most frequent cystic masses observed in ovary 20 to 50%.<sup>10</sup> Out of 16 ovarian cyst one had dermoid cyst and ovarian cystectomy done. In our study 6 girls presented with primary amenorrhoea, 3 had imperforated hymen surgical drainage done. Out of 3 vaginal atresia 2 are treated by vaginoplasty, 1 vaginal atresia girl had kidney abnormality she is referred to higher center for further management. One adolescent girl presented with vulval fibro epithelial polyp, after all investigations and oncology opinion simple excision done.

### Limitations

Limitation of current study was that authors included only those girls who came to their hospital but a large number of girls don't come to hospital because to social stigma, so

problems in adolescent girls are far bigger than authors included in this study.

## CONCLUSION

Adolescence population form precious human resource in every country. Adolescent girls with various symptoms need further evaluation and early management and treatment in these girls is the last chance to prevent growth lag, malnutrition and give better reproductive health and mental health. More adolescent and youth friendly clinics under a roof is the need.

*Funding: No funding sources*

*Conflict of interest: None declared*

*Ethical approval: The study was approved by the Institutional Ethics Committee*

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**Cite this article as:** Mendiratta SL, Dath SS, Yadav R, Mittal M, Naaz F. Health problems in adolescent girls. *Int J Reprod Contracept Obstet Gynecol* 2023;12:445-7.