

A Prospective Study on Profile of Gynaecological Problems in Adolescent Girls at a Tertiary Care Centre

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Abstract

Background: Gynaecological problems of adolescents occupy a special and very important place in the spectrum of gynaecological disorders. Keeping this background in mind, this study was done to find the gynaecological problems of the adolescents attending gynaecological OPD and emergency with the aim to study type of problems, causative factors and treatment modalities.

Methods: It is a cross-sectional study done in outpatient department of Obstetrics & Gynaecology Department of Hamdard Institute of Medical Sciences & Research over a period of one year. Data was collected with the help of a pre-designed, pre-tested questionnaire after taking proper informed written consent from the unmarried adolescent females with age 11-19 years. Quantitative data is tabulated in numerical value as percentages.

Results: In our study, most of the adolescents were the students of primary or secondary level educational status. The main complaint by adolescent girls in our study was menstrual problems (n=124, 75.1%) including irregularity in flow, bleeding, bleed days, occurrence of menses and pain. Menstrual problem was followed by vaginal discharge (n=43, 26%). The main diagnosis was PCOD which was in 23 girls followed by vaginal discharge in 17 participants and urinary tract infection in 16 girls.

Conclusion: A very empathetic attitude and special attention should be given to the adolescent population.

Keywords: Adolescent, Women, Gynaecological problems, Menstruation disturbances

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1. Introduction

Adolescence is a period which ranges between the age of 10-19 years. Early adolescence constitutes the 10-14 years age group. During early adolescence, the physical changes usually commence with the growth spurt followed by secondary sexual characteristics development. This can cause significant anxiety, psychological stress or excitement for an adolescent girl whose body is transforming. Late adolescence is between the age of 15-19 years. The major physical changes have already occurred but the body is still developing. Girls at this phase of late adolescence are at greater risk as compared to boys of same age group regarding health as well as emotional issues like eating disorders, anorexia / bulimia and menstrual abnormalities (1, 2).

This is a known fact that the gynaecological problems of adolescents occupy a special and very important place in the spectrum of gynaecological disorders of women of all ages. In this age, physical nature of problems is unique; and emotional and psychological factors are also associated in remodelling

of someone in the transition between childhood and womanhood (3). But there is a lack in the knowledge regarding sexual attitude of these age group. This lack of knowledge regarding adolescent sexual behaviour is more profound in Indian population.

Adolescent gynaecology is not a new subspecialized area of gynaecology but still it has not been explored optimally. A lot work has already been started on adolescent health but yet more concern is needed (4). Keeping this in mind, a study has been done to find the gynaecological problems of the adolescents attending gynaecological outpatient department (OPD) and emergency with the aim to study type of problems, causative factors and treatment modalities.

2. Methods

It is a cross-sectional study done in the department of Obstetrics & Gynaecology of Hamdard Institute of Medical Sciences & Research, New Delhi (India) over a period of one year. All the unmarried adolescent females with age 11- 19 years who came to the hospital with any complaints and were willing to participate

were included in the study.

Data was collected with the help of a pre-designed, pre-tested questionnaire after taking proper informed written consent. Specific mentioned proforma was filled using a checklist for each of the study participant which included their personal demographic details, complaints for which they visit our health facility, menstrual history, past as well as family history, personal history and examination findings including height, weight, secondary sexual characteristics, per abdomen or per rectal examination wherever its needed. Investigations such as hemogram, hormonal assays like Thyroid Stimulating Hormone (TSH), Follicle stimulating hormone / Lutenising hormone, Prolactin, coagulation profile, ultrasound were carried out as per requirement according to the complaints and clinical examination. All the girls were managed accordingly.

We routinely give counselling for good nutrition, physical fitness, exercise, responsible sexual behaviour, immunization, contraception to all adolescent girls attending our hospital as per the need of the patient. We did the counselling to all our study participants also. Data was analysed by standard statistical tests.

3. Results

During this one-year study period, 320 married as well as unmarried adolescents came to our OPD for various complaints. Out of 320, 165 unmarried adolescents were willing to participate in the study making this as our sample size. Demographic profile of adolescent girls included in our study was tabulated in Table 1. Most of the adolescents were the students of

Table 1: Demographic profile of participants

Age (years)	Number (%Age)
11-13	28 (16.9)
14-16	50 (30.3)
17-19	87 (52.7)
Educational status	Number (%age)
Illiterate	3 (1.8)
Primary/ Secondary	89 (53.9)
Higher Secondary	73 (44.2)
Occupation	Number (%age)
Student	156 (94.5%)
Employer	5 (3%)
Laborer	4 (2.4%)
Religion	Number (%age)
Hindu	115 (69.6%)
Muslim	47 (28.4%)
Christian	3 (1.8%)

*Quantitative data

primary or secondary level educational status.

There were varied range of symptoms with which these girls present to our outpatient department as shown in Table 2. The main complaint by adolescent girls in our study was menstrual problems (n=124, 75.1%) including irregularity in flow, bleeding, bleed days, occurrence of menses and pain. Menstrual problem was followed by vaginal discharge (n=43, 26%).

After taking proper and complete history and examination, all the girls were advised some test according to their complaints to make a diagnosis. Serum LH, FSH, Prolactin, TSH, coagulation screen, Complete blood count, urine routine microscopy, urine culture was done as shown in Table 3.

Table 2: Presenting complaints of adolescents*

Complaints			Number (%Age)
Menorrhagia			31 (18.7)
Oligomenorrhea			28 (16.9)
Dysmenorrhea			15 (9)
Amenorrhea	Primary	1	12 (7.2)
	Secondary	11	
Polymenorrhea			38 (23)
Vaginal discharge			43 (26)
Pain abdomen			29 (17.5)
Hirsutism			3 (1.8)
Acne			2 (1.2)
Galactorrhoea			0 (0)
Breast complaints			6 (3.6)
Urinary complaints			19 (11.5)
Perineal Abscess			3 (1.8)
Traumatic injury			0 (0)

*multiple answers (patient with more than one complaint), *Quantitative data

Table 3: Results of Appropriate Investigations advised

Investigations Advised (N)	Abnormal (Low, High, infection, positive Urine Pregnancy Test)
Complete Blood Count (134)	13 (9.7)
S. Luteinizing Hormone/Follicle Stimulating Hormone (51)	10 (19.6)
S. Prolactin (76)	2 (2.6)
Thyroid Stimulating Hormone (86)	1 (1.2)
Coagulation screen (31)	0 (0)
Urine test {routine & culture} (54)	16 (29.6)
Urine pregnancy test (11)	3 (27.3)

*Quantitative data

Among the radiological investigations, ultrasound (USG) was the only investigation which was advised in 142 girls. There was one girl who was advised chest Xray on the basis of USG findings suggestive of abdominal tuberculosis (TB) which was normal. Various USG findings are tabulated in Table 4.

On the basis of symptoms, signs, examination and investigations, diagnosis was made in 93 adolescent girls. In 72 girls, everything including examination, investigations, USG were normal. In these girls, appropriate counselling was done with reassurance of both the parents and the girl. This data is tabulated in Table 5.

All the patients were given appropriate conservative, medical and surgical management on the basis of their complaints and diagnosis. Out of 11 patients with ovarian cysts, two girls were having torsion at the time of presentation. Both the girls were managed

Table 4: Ultrasound findings

Findings	Number (%Age)
Normal	93 (56.3)
Polycystic ovarian disease	23 (13.9)
Free fluid in pelvis	5 (3.0)
Endometriotic cysts	2 (1.2)
Ovarian cysts	11 (6.7)
Normal intrauterine pregnancy	2 (1.2)
Missed abortion	1 (0.6)
Hydronephrosis	1 (0.6)
Cystitis	2 (1.2)
Mesenteric lymph nodes with features of tuberculosis	1 (0.6)
Infantile uterus	1 (0.6)
Not applicable	23 (13.9)

laparoscopically with removal of cyst and ovarian fixation. Ovary was preserved in both the cases and patient was doing fine till six months follow up. Perineal abscesses were drained immediately under antibiotic coverage. Abdominal tuberculosis was given antitubercular therapy for period of 6 months and patient was clinically better after completion of treatment.

Among these, three girls were got pregnant. Two were of age 18 years and one was of age 17 years. One girl underwent medical abortion resulting in curettage for retained products. One girl was having missed abortion, expelled completely medically and rest one girl continue pregnancy as about to get married. None of the girl was using any contraceptive method and knowledge of the any contraceptive method was present in the one girl only, rest were unaware about the

Table 5: Diagnosis

Diagnosis			Number (%Age)
Anaemia			13 (7.9)
Polycystic ovarian disease			23 (13.9)
Thyroid disorders			13 (7.9)
Hyperprolactinemia			1 (0.6)
Fibroid			0 (0)
Endometriosis			2 (1.2)
Ovarian Cyst	Without torsion	9	11 (6.7)
	With torsion	2	
Urinary Tract Infections			16 (9.7)
Fibroadenosis			5 (3)
Pelvic inflammatory disease / Vaginal discharge			17 (10.3)
Perineal Abscess			2 (1.2)
Teenage pregnancy			3 (1.8)
Coagulopathy			0 (0)
Delayed menarche			1 (0.6)
Abdominal Tuberculosis			1 (0.6)
None			72 (43.6)

*Quantitative data

term contraception.

4. Discussion

The most uncertain, turbulent, challenging and stressful phase in life is probably Adolescence. It is difficult for both the teenagers who are going through this phase as well as for their parents, teachers and health professionals. We have found in literature some studies in different regions of India, which can be compared to our study.

Demographic profile: In our study, the mostly around 53% girls in our study was of age 17-19 years. Most of the adolescents were the students of primary or secondary level educational status. This is similar to a study done by Goswami and colleagues in 2015. They also found that the maximum adolescent girls attending their Gynaecological OPD had ages in the range of 17 to 19 yrs. i.e. 56% which is similar to our study (5). Similar results were seen by Gandhi and colleagues that the 27% were in the early adolescent age group (10-14 years) and maximum number i.e. 73% were in the late adolescent age group (15-19 years) (1). In contrast, Ray and colleagues in their study observed that the 94.2% of their study participants were in the age of 13-16 years (6).

Presenting complaints: In our study, the main complaint by adolescent girls was menstrual problems (n=124, 75.1%) including irregularity in flow, bleeding, bleed days, occurrence of menses and pain. Menstrual problem was followed by vaginal discharge (n=43, 26%) and pain abdomen (n=29, 17.5%). This data is comparable with our studies mentioned. Menstrual dysfunction affects the majority of adolescents to some degree and is a leading reason for seeking medical advice. The extent of this problem has been graphically illustrated by Parker and colleagues. who looked at the high prevalence of pain, cramps and mood disturbance during menstruation in teenagers (7).

Ramaraju and colleagues in 2015 done a study in which they found that the menstrual disorders (74%) are the most common complaints followed by vaginal discharge (17%), ovarian tumours (7%), septic abortion (3%). They also concluded that the menstrual abnormalities were in form of amenorrhoea 21.62%, irregular menstruation 59.45% and dysmenorrhoea 18.91% (4).

Prakriti and colleagues found in their study that majority of adolescent girls suffered from menstrual

disorders, 60%. This was followed by leucorrhoea (10.66%), teenage pregnancy (10.66%), infections (8%), ovarian cysts (5.33%), sexual assault (2.66%) and infertility (2.66%). 55.55% adolescent girls with menstrual disorders had Menorrhagia, 17.7% adolescent girls had dysmenorrhoea, 6.66% adolescent girls had primary amenorrhoea, 17.7% adolescent girls had secondary amenorrhoea and only 2.22% adolescent girls had complaints of oligomenorrhoea (5).

Dambhare and colleagues in 2012 found in their study that the overall prevalence of dysmenorrhoea was 56.15%. Dysmenorrhea was more frequently observed among adolescents with irregular cycle (57.9%) as compared to those with regular cycle (42.1%). This was in contrast to our study in which dysmenorrhea is present in only 9% girls and no relation to regularity of cycles (8).

Diagnosis: In this present study, it has been found that the main diagnosis was PCOD which was in 23 (13.9%) girls followed by vaginal discharge in 17 (10.9%) participants and urinary tract infection in 16 (9.7%) girls.

Goswami and colleagues observed that on investigating the causes of menorrhagia, in majority cases (96%) no cause could be ascertained. In 1 (4%) adolescent girl, hypothyroidism was seen as the cause of menorrhagia. Anaemia was present in 33.3% girls. Of the 3 adolescent girls with primary amenorrhoea, 2 girls (66.66%) had vaginal atresia and 1 girl (33.33%) had imperforate hymen. 8 adolescent girls presented with secondary amenorrhoea; 6 out of 8 girls i.e. 75% had polycystic ovarian disease, 1 suffered from hypothyroidism and 1 suffered from TB abdomen; 8 adolescent girls presented with leucorrhoea i.e. 10.66%. Physiological cyst of ovary was found in 5.33% and teenage pregnancy in 10.66%. There were no patients with ovarian tumour similar to our study (5).

Bhalerao-Gandhi and colleagues found in their study that the most common complaints were related to menstrual cycles as 50% girls suffered from the same. 28% had complaints of androgenic features like hirsutism, acne, acanthosis which shows the preponderance for polycystic ovarian disease. 11% of total adolescent girls had leucorrhoea, few had vulvar problems like pruritus, two girls had breast problems like mastalgia and breast lump. Only one case of teenage pregnancy was seen during the study period. (1)

Rathod and colleagues in 2016 found that the out

of 655 girls, menstrual complaints (84.88 %) were the commonest indication for OPD consultation among adolescent girls. 17 girls required hospitalization; all of them needed blood transfusion due to significant severe anaemia resulting from puberty menorrhagia. 14 (82.35 %) had anovulatory DUB, while 2 (11.76 %) had coagulation disorders, and one (5.88 %) had hypothyroidism (9).

Prasad and colleagues also found that the menstrual disorder (53.33%) was the commonest gynaecological problem in adolescent girls ranging from amenorrhea, puberty menorrhagia, oligomenorrhea, and Polymenorrhea. Prevalence of dysmenorrhea in adolescent girls was found to be 31.25% followed by per vaginal Discharge (9.17%). Acne/Hirsutism alone or associated with PCOD were present in 10% and 8.33% of the adolescent girls were anaemic. Teenage pregnancy was present in 2.5% cases (10).

Archana kumari and colleagues found the same results as our study and other studies that the menstrual disorders were the commonest problem (74.1%) followed by vaginal discharge (14.3%). In their study they observed that the menorrhagia was present in 15 subjects with three of them having Hb <5gm/dl, nine had 6-8gm/dl and three had >8gm/dl. Out of 7 cases of primary amenorrhoea, 2 had imperforate hymen, 4 had Mullerian agenesis and 1 had Turner's syndrome. Among 14 cases of secondary amenorrhoea 10 had PCOS, 9 had pregnancy and 1 had premature ovarian failure (11).

A bridge between childhood and adulthood is adolescence which is a crucial period of life. It is a period of increased risk-taking behaviour, these people are not only susceptible to psychological problems but also vulnerable to sexually transmitted infections (STIs), and HIV (6, 12). So proper counselling and information should be given to prevent unintended pregnancies and reproductive morbidity. Lifestyle modifications and promoting healthy habits should be incorporated in school health education programs to improve reproductive health. Information, education and support should also be extended to parents in order to address the reproductive health needs of the female students (13-15).

5. Conclusion

Menstrual problems are the most bothersome in adolescents which bring them to the hospital. In most of the girls nothing was abnormal and only counselling

helped them. A very empathetic as well as non-judgemental attitude, friendly behaviour and special attention should be given to the adolescent population. This can be achieved by setting up of separate adolescent clinics for desired efficient management so that they can develop into responsible citizens of tomorrow and healthy parents in future.

Conflicts of interest: None to declare.

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