

# Clinical Spectrum of Adolescent Girls in Tertiary Care Centre

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## Abstract

**Introduction:** Adolescence marks a time of rapid and intense emotional and physical changes. The period of adolescence is most closely associated with the teenage years, though its physical, psychological and cultural expressions may begin earlier and end later. In studying adolescent development, adolescence can be defined biologically, as the physical transition marked by the onset of puberty and the termination of physical growth; cognitively, as changes in the ability to think abstractly and multi-dimensionally; or socially, as a period of preparation for adult roles. Major pubertal and biological changes include changes to the sex organs, height, weight, and muscle mass, as well as major changes in brain structure and organization.

**Objective(s):** (1) To know the prevalence of various clinical disorders in adolescent girls presenting in tertiary care center. (2) To evaluate various organic pathology in order to prevent long term consequences.

**Materials & Methods:** A total of one hundred and twenty adolescent girls attending the Reproductive Biology (RB), outpatient department of IGIMS, Patna were included in the study.

**Result:** Menstrual disorder were found to be commonest gynaecological problem (53.33%) followed by Per Vaginal discharge (9.17%), Breast problem (7.5%), Acne/Hirsutism (10%), Height (2.5%) and Weight (3.33%) problems, Anaemia (8.33%), Lump abdomen (2.5%), Teenage Pregnancy (2.5%) and Urogenital malformation (0.83%).

**Conclusion:** Adolescent girls suffer from various clinical problems which should never be overlooked. Organic pathology should be evaluated timely so as to improve the quality of life.

**Keywords:** Breast disease, Menstrual disorder, Per Vaginal discharge, Teenage Pregnancy

## INTRODUCTION

The word adolescent is derived from the Latin word *adolescere*, which means to grow in to maturity. WHO defines Adolescents as individuals in the 10-19 year age group. Adolescents belonging to the age group 10-19 year constitute almost one-fifth of the world's total population.<sup>1</sup> Adolescence is a transition period from childhood to adulthood and is characterised by a spurt in physical, endocrinal, emotional and mental growth, with a change from complete dependence to relative independence.<sup>2</sup> Adolescent gynaecology is a subspecialized area of gynaecology which has still not been explored optimally. In this study, an attempt has been made to review the clinical problems of the adolescent population attending the gynaecological outpatient department OPD.

## MATERIAL AND METHOD

One hundred and twenty adolescent girls attending OPD of Reproductive biology department, IGIMS, Patna from August 2010 to August 2012 were included in the study. All adolescent girls coming to the OPD Reproductive biology dept were suffering from various clinical disorders like menstrual disorder, acne, hirsutism, per vaginal discharge, anaemia, breast disease, weight and height problems, teenage pregnancy, lump abdomen and urogenital malformations, etc were included. A detailed history of gynaecological problems and other associated problems were taken. In addition to the general examination, height, weight, secondary sex characteristics were recorded. Investigations like complete blood count, routine urine, blood sugar coagulogram, hormonal assay (FSH, LH, Prolactin, TSH) and pelvic ultrasound were

done. Some specific test like S. insulin, DHEA-S, plasma free testosterone, bone age, CT scan, MRI, diagnostic laparoscopy if indicated were done.

## RESULT

Present study shows that menstrual disorder (53.33%) is the commonest gynaecological problem in adolescent girls (Table 1). Menstrual disorder range from amenorrhoea, puberty menorrhagia, oligomenorrhoea, and polymenorrhoea (Table 2). Prevalence of dysmenorrhoea 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%. In the present study 8.33% of adolescent girls were anaemic. Adolescent girls present with Benign breast disease (7.5%), Weight problems (3.33%), Height problems (2.5%), Teenage pregnancy (2.5%) and Urogenital malformation (0.83%).

## DISCUSSION

Present study shows that menstrual disorders are the commonest gynaecological problem (53.33%) in adolescent girls. Menstrual disorder were the commonest problem (58.06%) in one of the study conducted by Goswami Sebanti et al (2005).<sup>3</sup> Menstrual disorders form the commonest gynaecological complaint (45-58%) among adolescent girls, yet are often overlooked.<sup>4,5</sup> The common menstrual disorders reported in adolescent girls

are amenorrhoea, abnormal/ excessive uterine bleeding, dysmenorrhoea and premenstrual syndrome which can be effectively diagnosed and treated in the adolescent population.<sup>6</sup> Amenorrhoea both primary and secondary were present in 14 girls (21.90%) in present study (Table 3). Mullarian agenesis were found in 3 out of eight girls with primary amenorrhoea and one of these three had solitary kidney. One case of primary amenorrhoea diagnosed as MRKH and 2 cases as vaginal agenesis. Vaginoplasty done in one of the girls is now having regular menstruation. Mullarian agenesis also referred to as mullarian aplasia, Mayer-Rokitansky-Kauser Hausner Syndrome, Vaginal agenesis given an incidence of 1 per 4,000-10,000 female.<sup>7</sup> After gonadal dysgenesis, Mullarian agenesis is the second most common cause of Primary amenorrhoea.<sup>8</sup> One case of primary amenorrhoea was diagnosed as testicular feminizing syndrome through Karyotyping. One case of hypogonadotrophic hypogonadism was diagnosed on the basis of short stature, low FSH, Bone age by X-Ray (left wrist). Secondary amenorrhoea duration<sup>4-5</sup> months or oligomenorrhoea were diagnosed to be a case of Polycystic ovarian disease based on clinical criteria of menstrual problem, hyperandrogenism, obesity and USG findings. Secondary amenorrhoea due to endocrine factor, hypothyroidism and hyperprolactinemia present in 25% of each case. In present study dysmenorrhoea were reported in 31.25% of adolescent girls. Dysmenorrhoea (69.4-72.3%) is one of the most frequently reported problems in adolescent girls followed by abnormal cycle lengths (9-11%). A dysmenorrhoea incidence of 33.5% was reported by Nag (1982),<sup>9</sup> among adolescent girls in India. In recent times, George and Bhaduri,<sup>10</sup> concluded that dysmenorrhoea (87.87%) is a common problem in India. High prevalence of dysmenorrhoea were reported by Anil K Agrawal and Anju Agrawal (71.96%),<sup>2</sup> Mckay and Diem (67%),<sup>11</sup> and Harlow and Park (71.6%),<sup>12</sup>. In the present study Oligomenorrhoea was reported in 18.75% of adolescent girls. Although 87.3% had normal cycles between 25 and 35 days, and according M.K.C. Nair et al 2011(11.3%),<sup>13</sup> were oligomenorrhoeic, or cycle length greater than 35 days, comparatively lower than the 18-32.9% reported in other studies which included young adolescents.<sup>4,14</sup> In van Hooffs cohort of 15 year old

**Table 1: Gynaecological complaints**

Gynaecological problem	Number	Percentage
Menstrual disorder	64	53.33%
Acne/Hirsutism	12	10%
Per vaginal discharge	11	9.17%
Anaemia	10	8.33%
Breast disease	9	7.5%
Weight problem	4	3.33%
Height problem	3	2.5%
Lump abdomen	3	2.5%
Teenage pregnancy	3	2.5%
Urogenital malformation	1	0.83%

**Table 2: Menstrual disorders**

Menstrual disorder	N=64 (53.33%)	Percentage%
Amenorrhoea	14	21.90
Primary	6	42.85
Secondary	8	57.14
Dysmenorrhoea	20	31.27
Oligomenorrhoea	12	18.75
Puberty menorrhagia	8	12.50
Polymenorrhoea	6	9.37
Hypomenorrhoea	4	6.21

**Table 3: Etiology of menstrual disorders**

Etiology	N	Percentage %
<b>Primary amenorrhoea</b>	<b>6</b>	<b>42.85</b>
Mullerian agenesis	3	50
Hypogonadotrophic hypogonadism	2	33.33
Testicular feminising syndrome	1	16.67
<b>Secondary amenorrhoea</b>	<b>8</b>	<b>57.14</b>
Polycystic ovarian disease	3	37.5
Hypothyroidism	2	25
Hyperprolactinemia	2	25
Secondary amenorrhoea with Cachexia	1	12.5

girls, 51% of oligomenorrhoeic adolescents remained oligomenorrhoeic at age 18 years and not only obese, but also normal weight oligomenorrhoeic adolescents had a high risk of remaining oligomenorrhoeic.<sup>15</sup> Yet, consideration should be given to gynaecological evaluation in girls whose cycle are longer than 90 days, since amenorrhoea of this interval or longer may have important implications for long term bone and cardiovascular health.<sup>16</sup> Puberty menorrhagia present in 16% of adolescent girls in this study. DUB is not only restricted to the adult population but is more common in adolescents.<sup>17</sup> In as many as 95%, abnormal vaginal bleeding is caused by DUB.<sup>18</sup> It takes 2 to 5 years for the complete maturation of hypothalamic pituitary ovarian axis.<sup>19</sup> Abnormal cycle length has been reported in 37.2% of subjects in a study of secondary school girls. In present study Acne/Hirsutism either alone or with PCOS is present in 10% of adolescent girls. Acne with Hirsutism is frequent in teenage girls. Acne is a common skin problem for adolescents. It is the Most important change taking place during adolescence.<sup>20</sup> In the present study adolescent girls presenting with benign breast changes was 7.5%. Common presenting signs and symptoms in the adolescent patient are breast pain, nipple discharge, and the discovery of a mass.<sup>21,22</sup> It is estimated that approximately 25% of adolescent girls have breast asymmetry that persists into adulthood.<sup>23</sup> The prevalence of anaemia in the present study is 8.33%. In one study the Prevalence of anaemia was 90.1%, with prevalence of severe anaemia of 7.1%, among adolescent girls from 16 districts of 11 states, mainly from the northern and eastern parts of India.<sup>24</sup>

In present study Teenage pregnancy was reported in 2.5% and in the study of Prianka Mukhopadhyay et al 2010, Data of the National Family Health Survey (NFHS)-3 revealed that 16% of women, aged 15-19 years, had already started childbearing.<sup>25</sup>

In present study urogenital malformation was present in 0.83%. Incidence of these anomalies is believed to be between 0.5% and 5%. In our study an eighteen year old girl presented with complaint of passing small amount of urine through dimple in vagina. She used to micturate, defecate and menstruate through rectum. Her provisional diagnosis was complex congenital uterine anomaly with hematometra with agenesis of Rt kidney. In the first sitting EUA and cystoscopy was done. In the second sitting, hematometra and hematocolpos was drained by abdomino-vaginal route and cervico vaginal communication was created. Neovagina was created. Cervical dilation was done periodically.

Mullerian duct anomalies are congenital anomalies of female genital tract that result due to non development or non fusion of mullerian ducts or failed resorption of uterine septum.<sup>26-28</sup>

## CONCLUSION

Puberty is shrouded with Secrecy, Suspicion and Superstition. A gynaecological complaint in adolescent girl is not discussed openly. She may be hesitant to tell anyone, but feels most comfortable in talking to her mother. Wherever obvious pathology is found, proper treatment, with regular follow up and reassurance is the need.

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