



Original Article

Evaluation of Menstrual Disorders Among School Going Adolescent Girls

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ABSTRACT

Introduction: For the first few years after menarche, irregular and longer cycles are common. Early recognition and appropriate management of menstrual problems can significantly reduce the adverse impact on academic performance, self-esteem, and social participation. Present study was undertaken to study about various Gynecological problems especially menstrual complaints and to analyze various causes of the menstrual abnormalities

Objective: To study about various gynecological problems especially menstrual complaints among the school going adolescent girls in the age group of 11-18 years and to analyze various causes of the menstrual abnormalities in them.

Materials and Methods: It was a prospective observational study of adolescent girls attending the Gynecology OPD at a tertiary hospital, for the period of one year. Data were collected by using proforma after obtaining patients' consent.

Results: Total 80 adolescent girls came in Gynecology OPD at our hospital. The maximum incidence of complaints was seen at the age group of 16 years. The mean age of menarche in this study was 13.3 years. Menstrual disorders were seen among 56.25%. Among various menstrual complaints, Oligomenorrhoea (45.0%) was the common menstrual problem, followed by Dysmenorrhoea (29.50%), Menorrhagia (13.11%), Poly menorrhea (8.19%), Hypomenorrhoea (3.27%) and Primary amenorrhea (1.63%).

Conclusion: Adolescent girls experience a variety of gynecological complaints, with menstrual disorders being the most common. Menstrual irregularities are typically expected within the first 1–2 years following menarche; however, if they persist, evaluation for conditions such as polycystic ovary syndrome (PCOS) and hypothyroidism is recommended. Early diagnosis of PCOS is essential to prevent future reproductive and metabolic complications.

Keywords: Menstrual disorder, Adolescent, Menorrhagia, PCOS, Hypothyroidism.

INTRODUCTION

The word “adolescence” is derived from a Latin word “adolescere”, meaning “to grow up”. Between infancy and adulthood, the physical and mental growth stage known as adolescence is marked by significant hormonal changes. According to the WHO, an adolescent is someone who is between the ages of 10 and 19 and is in their second decade of life.[1,2] Adolescence period characterized by a spurt in physical, endocrine, emotional, and mental growth. Hence along with physiological changes, psychological and socio-behavioral changes also occur. Menstruation often begins between the ages of 11 and 15. Emotional disturbances, extended menstrual bleeding, dysmenorrhea, and premenstrual syndrome, are common menstrual abnormalities that female adolescents may have after menarche; 75% of girls have some menstrual-related issues.[3]

Studies suggest that menarche tends to appear earlier in life as the sanitary, nutritional, and economic conditions of a society improve.[4] For most females, it occurs between the age of 10 and 16 years; however, it shows a remarkable range of

variation.[5] The normal range for ovulatory cycles is between 21 and 35 days. While most periods last from 3 to 5 days, duration of menstrual flow normally ranges from 2 to 7 days. For the first few years after menarche, irregular and longer cycles are common.[3,6,7]. Early recognition and appropriate management of menstrual problems can significantly reduce the adverse impact on academic performance, self-esteem, and social participation. Moreover, comprehensive school health programs that include menstrual health education can empower girls to manage menstruation with dignity and confidence, promoting gender equality and psychosocial development [8].

In this context, the present study was undertaken to study about various gynecological problems especially menstrual complaints in the school going adolescent girls in the age group of 11-18 years and to analyze various causes of the menstrual abnormalities in them.

AIM AND OBJECTIVES

Present study aims to assess various gynecological problems especially menstrual complaints among the school going adolescent girls in the age group of 11-18 years and to analyze various causes of the menstrual abnormalities in them.

Objectives:

1. To analyze various gynecological complaints in adolescent girls
2. To analyze various Menstrual complaints in adolescent girls

MATERIALS & METHODS

Study population: A total of 80 adolescent girls aged 11-18 years who attended Gynecology OPD at the Department of Obstetrics and Gynecology, Jhalawar Medical College, Jhalawar, Rajasthan were enrolled into the study.

Study design: Prospective observational study

Inclusion criteria: All adolescent girls who attended Gynecology OPD with Gynecological problems

Exclusion criteria: Adolescent girls who are pregnant.

Methodology: Detailed history was collected regarding the Gynecological complaints especially menstrual problems. A thorough physical examination should include assessments of height, weight, body mass index (BMI), secondary sexual characteristics, as well as a detailed examination of the breast and thyroid gland. BMI is calculated using the Quetelet Index, which is derived by dividing a person's weight in kilograms by the square of their height in meters. $BMI = \text{Weight in kg} / \text{height in m}^2$. A general examination includes assessing the thyroid and breast, as well as evaluating the presence of pubic hair, acne, and hirsutism.

RESULT

This study on evaluation of menstrual disorders among school going adolescent girls was conducted on 80 adolescent girls came in Gynecology OPD at our hospital. The maximum incidence of complaints was observed among the girls at the age group of 16 years. The mean age of menarche in this study was 13.3 years. Most adolescent girls belonged to socioeconomic class IV. According to BMI, 62.5% of girls were with normal BMI, 7.5% were obese, 12.5% were overweight and 17.5% were underweight.

Out of 80 adolescent girls, 33 (41.25%) had regular menstrual cycle, while 46 (56.25%) had irregular menstrual cycles and 2.5% had not attained menarche. adolescent girls out of various presenting complaints studied, menstrual related complaints were the commonest which is present in 61(76.25%) girls. Among various menstrual complaints, Oligomenorrhoea (45.0%) was the common menstrual problem, followed by Dysmenorrhoea (29.50%), Menorrhagia (13.11%), Poly menorrhoea (8.19%), Hypomenorrhoea (3.27%) and 1(1.63%) patient had Primary amenorrhoea.

In this study most of the adolescent girls were anaemic ranging from mild to severe anaemia. Twenty (25%) patients had normal hemoglobin level, 21 (26.25%) patients were mild anaemic, 29 (36.25%) patients were moderately anaemic, 10 (12.50%) patients were severely anaemic; and the severe anemic were hospitalized and received blood transfusions for anemia correction.

In our study 42 (52.50%) patients had normal USG findings, and 26 (32.5%) patients were diagnosed with polycystic ovarian syndrome, 9 (11.25%) patients were diagnosed with adnexal mass, most of them had functional ovarian cyst (4 of them underwent surgery for torsion ovarian cysts). and 1 (1.25%) girl was diagnosed with Hematocolpos (Imperforate hymen).

On the basis of clinical diagnosis out of 80 adolescent girls 26 (32.5%) were diagnosed with polycystic ovarian syndrome. 10 (12.50%) had Oligomenorrhoea, 10 (12.50%) had Dysmenorrhoea. 9 (11.25%) with Adnexal mass, 5 (6.25%) patient

each have Hypothyroid, Leucorrhoea and Menorrhagia. 4 (5%) with polymenorrhea. 2 (2.5%) with hypomenorrhea and 1 (1.25%) had primary amenorrhoea.

DISCUSSION

The study was conducted at Jhalawar Medical College Hospital to analyze the various gynecological problems especially menstrual complaints prevalent among the adolescent girls as well as to know the cause and factors associated with it. In this study the maximum number of gynecological complaints was at the age group of 16 years (26%). The age of menarche ranged from 11-14 years with average age of 13.3 years. The mean age of menarche in the study done by Cakir Murat et al from Turkey (2006) was 12.8 years in the range of 9-17 years.[4] The mean age of menarche in the study done by Lee and Chen et al from Malaysia (2006) was 12.3 years with the range of 9-17 years.[3] In the study done by Patil et al from Maharashtra (2009) showed the mean age of menarche was 13.7 years.[9]

In the present study menstrual disturbances were the most common presenting complaints. It accounted for 76.25%. In the study done by Goswami et al 2005 the prevalence was 58.8%.[10] And in the study by Tehara et al the prevalence was 85%.[11]

In the present study, menstrual irregularities were observed in 56.25% of adolescent girls. The most common menstrual complaint was oligomenorrhea, affecting 45% of the participants; polymenorrhea found in (8.19%). In contrast, a study conducted by Anupriya et al. in Singapore (2009) reported menstrual irregularities in 23.1% of adolescents, with oligomenorrhea occurring in 15.3% and polymenorrhea in 2%.[12]

In the present study, menorrhagia accounted for 13.11% of all menstrual complaints. Overall, out of total 80 subjects under study, it was observed that 20 (25%) of the subjects had normal range of hemoglobin levels, while the rest 60 (75%) of the subjects has mild to moderate degree of anemia; which is quite high against the prevalence of anemia (31.40%) reported among apparently healthy adult individuals of 18-60 years of age[13]; showing that adolescent age group among girls need more attention in view of anemia.

Among adolescent girls with menorrhagia, anemia ranged from moderate to severe. Of the eight cases, seven required hospitalizations due to severe anemia and underwent blood transfusion, while one had moderate anemia. In comparison, the study conducted by Lee & Chen et al. reported a 0.4% prevalence of anemia among girls with menorrhagia,[3] in contrast to the blood transfusion frequency of 4.02% among obstetric haemorrhage cases reported by Sushama D et al. [14] Anaemia has also been reported as a major health problem noted in the school dropped out children aged 6-14 years in an urban slum setting. Interventions to improve school retention must address financial barriers, enhance parental awareness, and integrate health services targeting this vulnerable group.[15]

In the present study, dysmenorrhoea was found in 22.50% of girls. The prevalence of dysmenorrhoea in various other studies has been reported as follows - Gilany et al 2005 (74.60%),[16] Cakir et al 2007 (89.5%),[4] Tehara et al 2008 (60%),[11] Pragy Sharma et al 2008 (67.3%),[17], and Anupriya et al 2009 (83.2%).[12]

India, traditionally burdened with undernutrition, is currently undergoing a rapid epidemiological transition characterized by a rising prevalence of obesity and obesity-related non-communicable diseases such as diabetes mellitus, hypertension, and cardiovascular disease. [18-21] In the present study, the prevalence of overweight and obesity among adolescent girls was 12.5% and 7.5%, respectively. According to the CDC National Health Statistics report from the U.S. (2006), the prevalence of overweight adolescents varied by ethnicity, with rates of 14% among white teens, 24% among black teens, and 17% among Hispanic teens.

PCOS is characterized by ovulatory dysfunction, polycystic ovarian change and hyperandrogenism. In addition to this, PCOS is also associated with dyslipidemia, insulin resistance and obesity.[19] The disorder affects ovaries during reproductive age group, including pregnancy as well as after childbirth. Women with this disorder face difficulties in conception. They experience many complications even under successful pregnancies.[22] The prevalence of PCOS in the present study was 32.5% (26/80), with diagnoses based on Rotterdam's criteria. Among adolescent girls diagnosed with PCOS, 18.75% had a normal BMI, 5% were obese, 7.5% were overweight, and 1.25% were underweight. In contrast, a study conducted by Joseph N et al. found that PCOS cases were more commonly associated with higher BMI [23].

On the basis of clinical diagnosis out of 80 adolescent girls 5 (6.25%) patients had hypothyroidism. By providing insights into this understudied population, the study seeks to underscore the importance of routine thyroid screening and timely intervention in tertiary settings to optimize maternal health.[24]

In this study, primary amenorrhoea was observed in 2.5% of adolescent girls. Comparatively, the incidence of primary amenorrhoea was reported as 4.28% in the study by G Sebanti et al [10], and 4.2% in the study by Prem P et al [25].

CONCLUSION

Adolescent girls experience a variety of gynecological complaints, with menstrual disorders being the most common. Menstrual irregularities are typically expected within the first 1–2 years following menarche; however, if they persist, evaluation for conditions such as polycystic ovary syndrome (PCOS) and hypothyroidism is recommended. Early diagnosis of PCOS is essential to prevent future reproductive and metabolic complications.

Therefore, lifestyle and dietary modifications aimed at weight reduction play a crucial role in minimizing long-term health risks for adolescent girls. Puberty menorrhagia in adolescents should be managed effectively, in order to prevent anemia and blood transfusion.

Adolescent gynecology has long been recognized as an essential field, but it requires increased attention and awareness to safeguard adolescent health. Establishing dedicated adolescent clinics is crucial, as the gynecological concerns of this age group differ significantly from those of adults. These clinics can provide specialized care, early diagnosis, education, and preventive measures, addressing menstrual disorders, hormonal imbalances, and reproductive health concerns in a tailored manner.

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