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Original Research Article.

To Assess Prevalence of Abnormal Uterine Bleeding Among Adolescents: An Institutional Based Study

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ABSTRACT

Background: Abnormal uterine bleeding (AUB) is one of the most common conditions for which women consult their gynaecologists. Abnormal uterine bleeding or AUB refers to abnormally heavy bleeding and bleeding with irregular timing. The present study was conducted to assess prevalence of abnormal uterine bleeding among adolescents in a tertiary care hospital.

Materials and Methods: The present study was a prospective observational study conducted among adolescents to assess prevalence of abnormal uterine bleeding. The sample included Adolescent females of 13 to 18 years of age, who presented with clinical features suggestive of AUB. AUB was classified using the palm coein. A detailed history, systemic examination and routine laboratory tests was done in all patients. The recorded data was analyzed using the SPSS software (version 22.0, IBM Corporation, New York, United States).

Results: A total of 400 adolescents attended OPD of which 278 girls (69.5%) presented with menstrual complaints and 122 (30.5%) with non-menstrual complaints. The most common pattern of AUB found was menorrhagia (52.15%) followed by metrorrhagia (20.50%). 278 girls with AUB were further investigated and classified by palm- coein approach. On applying Palm Coein approach, most common etiology of AUB in adolescents was ovulatory disorder accounting for 95.32% of cases followed by polyp (2.5%). On further evaluation of ovulatory disorders causing AUB, contribution of immaturity of HPO axis, PCOS, thyroid disorders were 64.15%, 25.28% and 10.56% respectively.

Conclusion: The present study concluded that the most common pattern of AUB in adolescents was menorrhagia followed by metrorrhagia. On applying Palm Coein approach, most common etiology of AUB in adolescents was ovulatory disorder.

Keywords: Adolescents, Menstrual Complaints, AUB, Palm Coein.

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INTRODUCTION

Menstrual disorders are common gynecological problem for medical visits among women of reproductive age.[1] Heavy menstrual bleeding affects up to 30% of women in their reproductive period.[2] Abnormal Uterine Bleeding may be defined as any variation from the normal menstrual cycle such as changes in regularity and frequency, duration of flow or amount of flow and it accounts for one third of patients to visits gynecologists.[3]

AUB is a symptom and can arise from different causes like physiological processes in various age-groups, structural lesions, systemic and hormonal causes as well as malignancy. In 2011, the FIGO classification system (PALM-COEIN) was published in order to standardize terminology, diagnosis and investigations in women presenting with AUB.[4]

The classification system includes nine categories, organised under the acronym "PALM-COEIN". PALM group includes five structural aetiologies of AUB that can be diagnosed with ultrasound and/or histopathology (polyp, adenomyosis, leiomyoma, malignancy, and hyperplasia). COEIN group includes non-structural entities i.e. coagulopathy, ovulatory dysfunction, endometrial, iatrogenic, and not yet classified.[4] AUB is a common condition affecting women at all ages and interferes with women's physical, emotional and social quality of life. It is important to reach correct clinical diagnosis and identify the causative factor. Ultrasonography is usually a safe initial investigation as it is non-invasive and can give us an idea about any structural cause. Hysteroscopy has been generally accepted as gold standard in

evaluation of the uterine cavity.[5] The present study was conducted to assess prevalence of abnormal uterine bleeding among adolescents in a tertiary care hospital.

MATERIALS AND METHODS

The present study was a prospective observational study conducted in Department of Obstetrics & Gynaecology, Rama Medical College Hospital and Research Centre, Hapur, Uttar Pradesh (India) among adolescents to assess prevalence of abnormal uterine bleeding. Before the commencement of the study ethical approval was taken from the Ethical Committee of the institute and written consent was taken from the patient or guardian after explaining the study. The sample included Adolescent females of 13 to 18 years of age, who presented with clinical features suggestive of AUB. AUB was classified using the palm coein.[4] Patients already on hormonal therapy, those with primary amenorrhea were excluded from study. A detailed history, systemic examination and routine laboratory tests was done in all patients. All patients underwent a series of investigations which included FSH, LH, prolactin, testosterone levels, thyroid profile, coagulation profile, fasting insulin level and cortisol level. Ultrasound of abdomen and pelvis was done in all cases. Computed tomography (CT) or magnetic resonance imaging (MRI) was advised whenever necessary. The recorded data was analyzed using the SPSS software (version 22.0, IBM Corporation, New York, United States). Continuous variables were expressed as mean ± standard deviation and categorical variables were summarized as frequencies and percentages.

Table 1: Clinical characteristics of enrolled subjects with abnormal bleeding (n=278)

Clinical characteristics	N(%)
Age group (yrs)	
13-15	156(56.11%)
16-18	122(43.88%)
Patterns of AUB	
Menorrhagia	145(52.15%)
Metrorrhagia	57(20.50%)
Polymenorrhoea,	33(11.87%)
Menometrorrhagia	39(14.02%)
Hypomenorrhoea	4(1.43%)

Table 2: Distribution of subjects with AUB by PALM COEIN classification (n=278)

Classification	N(%)
PALM	
Polyp	7(2.5%)
Adenomyosis	0(0%)
Leiomyoma	2(0.7%)
Malignancy	0(0%)
COEIN	
Coagulopathy	3(1.07%)
Ovulatory disorder	265(95.32%)
Immaturity of HPO	170(64.15%)
PCOS	67(25.28%)
Thyroid disorders	28(10.56%)
Endometerial	1(0.3%)
Iatrogenic	0(0%)
Non-specified	0(0%)

RESULTS

A total of 400 adolescents attended OPD of which 278 girls (69.5%) presented with menstrual complaints and 122 (30.5%) with non-menstrual complaints. The most common pattern of AUB found was menorrhagia (52.15%) followed by metrorrhagia (20.50%). 278 girls with AUB were further investigated and classified by palm- coein approach. On applying Palm Coein approach, most common etiology of AUB in adolescents was ovulatory disorder accounting for 95.32% of cases followed by polyp (2.5%). On further evaluation of ovulatory disorders causing AUB, contribution of immaturity of HPO axis, PCOS, thyroid disorders were 64.15%, 25.28% and 10.56% respectively.

DISCUSSION

Abnormal uterine bleeding is described as any bleeding which does not fulfil the criteria of normal menstrual bleeding. There are various causes of AUB. Organic cause of abnormal uterine bleeding may be subdivided into reproductive tract disease, iatrogenic causes and systemic disease. After exclusion of all organic causes, diagnosis of dysfunctional uterine bleeding (DUB) is assumed. In about 25% of the patients, the abnormal uterine bleeding is the result of a well-defined organic abnormality.[6]

A total of 400 adolescents attended OPD of which 278 girls (69.5%) presented with menstrual complaints and 122 (30.5%) with non-menstrual complaints. The most common pattern of AUB found was menorrhagia (52.15%) followed by metrorrhagia (20.50%). 278 girls with AUB were further investigated and classified by palm- coein approach. On applying Palm Coein approach, most common etiology of AUB in adolescents was ovulatory disorder accounting for 95.32% of cases followed by polyp (2.5%). On further evaluation of ovulatory disorders causing AUB, contribution of immaturity of HPO axis, PCOS, thyroid disorders were 64.15%, 25.28% and 10.56% respectively.

The World Health Organization conducted a 2-year longitudinal study on menstrual and ovulatory patterns in females aged 11 to 15 & found that 19% of girls had regular cycles in first three cycles and 67% had regular cycles by the end of 2 years.[7]

Reported rates of PCOS amongst adolescents with AUB has a wide range across globe: 9- 72%.[8,9]

Polyps, which are localized endometrial intrauterine overgrowth, that may be single or multiple, may measure from few millimetre to centimeters and may be sessile or pedunculated are among the important differential diagnosis of AUB.[10]

Prevalence of polyps has been reported from 7.8% to 34.9% in women of reproductive age group.[11-13]

Menstrual abnormalities in adolescents may also be the presenting manifestation of a serious underlying coagulation disorders like von Willbrand disease.[14-16]

Moreover, 67% of those with anovulatory bleeding were overweight or obese, the latter being associated with gonadal steroid hormone changes that result in disruption of ovulation and menstrual irregularities.[17,18]

In developing countries prevalence Abnormal Uterine Bleeding appears to affect about 5-15% of women of reproductive age and probably a higher percentage of women in older age groups. Data on prevalence of Abnormal Uterine Bleeding is limited, but it is a major cause of gynecological morbidity, affecting up to 1 in 5 women at some point during their reproductive lifespan.[19] Nine to fourteen percent of reproductive age women have blood loss that exceeds 80 ml[20] and Abnormal Uterine Bleeding is a leading indication or hysterectomy, the most common major gynecological operation in women.[21,22]

CONCLUSION

The present study concluded that the most common pattern of AUB in adolescents was menorrhagia followed by metrorrhagia. On applying Palm Coein approach, most common etiology of AUB in adolescents was ovulatory disorder.

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