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Original Research Article

Pattern of abnormal uterine bleeding in a tertiary care hospital

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ABSTRACT

Background: Abnormal uterine bleeding (AUB) is a significant clinical entity. Aim of the study was to observe the pattern of AUB in tertiary care hospital.
Methods: All patients attending gynae OPD and ward presenting with AUB were included in the study.
Results: A total 640 women had AUB in one year of study period. Highest incidence of AUB is observed in the age group 40-49 years**.** The most common clinical presentation of AUB was metrorrhagia followed by polymenorrhoea, menorrhagia, menometrorrhagia, oligomenorrhoea and hypomenorrhoea. On ultrasonography the commonest finding was leiomyoma uterus (28.15%) followed by increased endometrial thickness (18.46%). The most common histological pattern was proliferative endometrium (34.10%). According to PALM-COEIN classification the maximum incidence found was of AUB-L followed by AUB-O.
Conclusions: The prevalent causes of AUB vary with age. So, all the patients presenting with AUB to gynaecology departments were included in the study irrespective of age. The information presented in this study adds to our understanding of patterns of the AUB.

Keywords: Abnormal uterine bleeding, PALM-COEIN, Heavy menstrual bleeding

INTRODUCTION

Abnormal uterine bleeding (AUB) is a significant clinical entity.[1] AUB is defined as changes in the frequency of menstruation, duration of flow, or amount of blood loss.[1] AUB and its sub group, heavy menstrual bleeding (HMB), are common conditions affecting 14-25% of women of reproductive age and may have a significant impact on their physical, social, emotional and material quality of life.[1-3] Acute AUB is defined as AUB in a woman requires immediate intervention to prevent further blood loss. Chronic AUB was defined as 'bleeding from the uterine corpus that is abnormal in volume, regularity and/or timing that has been present for the majority of the last 6 months.[4] AUB can occur in any age and has different types of presentation.[5] The population-based norms are wider than the generally accepted norms for menstrual frequency (24-35 days), regularity (±5 days variation), and duration (2-7 days) among ovulatory women.[7] AUB results from any disturbances between the regulatory mechanism of pituitary ovarian axis or pelvic diseases.[8] The irregularity in menstrual cycle during perimenopause can be due to anovulation or to irregular maturation of follicles.[9] In 2011, the FIGO classification system (PALM-COEIN) was published in order to standardize terminology, diagnosis and investigations in women presenting with AUB.[4] PALM group includes five structural etiologies 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 otherwise classified. 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.[10]

Histopathological evaluation of endometrial tissue by curetting or aspiration is a safe and effective method for determining the cause of AUB after excluding systemic and structural causes.[11]

Aim of the study was to observe the pattern of AUB in tertiary care hospital.

METHODS

This was a prospective observational study of pattern of AUB conducted in the department of obstetrics and gynecology, Shri Lal Bahadur Shastri medical college Mandi, Himachal Pradesh for period of one year from 1st January 2023 to 31st December 2023.

Inclusion criteria

All patients presenting with AUB to gynae OPD and gynae ward were includedin the study.

Exclusion criteria

Patirnts with pregnancy-related complications like (threatened/ incomplete/ missed miscarriage and ectopic pregnancy) and gestational trophoblastic diseases were excluded from the study.

The detailed record of clinical history regarding age, menstrual history (pattern and duration of abnormal bleeding), obstetric history, general physical and gynaecological examination were collected.

Complete hemogram, thyroid function test, renal function test, liver function test, fasting blood sugar, coagulation profile, viral markers of the patients were recorded. Ultrasound reports, hysteroscopic findings and histopathological reports were recorded in a proforma. A total of 640 cases of AUB attended gynae OPD and ward during a study period of one year.

Statistical analysis

Data was entered in excel and analysed by using software SPSS 17.

RESULTS

A total 640 women with AUB attended gynae OPD and ward in the study period of one year. Highest incidence of AUB is observed in the age group 40-49 years followed by 30-39 years, then 50 years and above. Least incidence was found in 20-29 years age group.

On ultrasonography, the commonest finding was leiomyoma uterus (28.15%) followed by increased endometrial thickness (18.46%), PCOS (16.56%), adenomyosis (15.6%), normal scan (11.4%), endometrial polyp (7.8%) and ovarian cyst (2.03%).

Table 1: Age distribution (n=640).

Age (In years)	N (%)
<20	6 (0.9)
20-29	5 (0.78)
30-39	166 (25)
40-49	406 (63)
>50	57 (8.9)

The most common clinical presentation of AUB was metrorrhagia followed by polymenorrhoea, menorrhagia, menometrorrhagia, oligomenorrhoea and hypomenorrhoea (Table 2).

Table 2: Pattern of AUB (n=640).

Pattern of AUB	N (%)
Metrorrhagia	364 (56.8)
polymenorrhoea	121 (18.9)
Menorrhagia	64 (10)
Menometrorrhagia	47 (7.34)
Hypomenorrhoea	22 (3.4)
Oligomenorrhoea	22 (3.4)

Table 3: Ultrasound findings (n=640).

Ultrasound findings	N	Percentage (%)
Leiomyoma	180	28.15
Normal scan	73	11.4
Increased endometrial thickness	118	18.4
PCOS	106	16.56
Adenomyosis	100	15.6
Endometrial polyp	50	7.8
Ovarian cyst	13	2.03

According to PALM-COEIN classification (Table 4), the maximum incidence was of AUB-L followed by AUB-O. Endometrial hyperplasia was the cause in 118 cases while endometritis in only 8 cases.

Ten patients had AUB-I (iatrogenic) because of CU-T (IUCD). Only one patient had coagulopathy and pancytopenia. Three patients of AV malformation were included as AUB-N (not otherwise classified).

Endometrial biopsy was done in only 346 cases as it was not indicated in the patients with PCOS, coagulopathy, endometritis, AUB-I and AUB-N.

The most common histological pattern was proliferative endometrium (34.10%) followed by the secretory endometrium (28.90%).

Table 4: PALM-COEIN classification (n=640).

PALM-COEIN	N	Percentage (%)
Polyp	50	7.8
Adenomyosis	100	15.6
Leiomyoma	180	28.12
Endometrial hyperplasia	118	18.4
Malignancy	5	0.78
Coagulopathy	1	0.15
Ovulatory disorder	165	25.78
Endometrial disorder (endometritis)	8	1.25
Iatrogenic	10	0.15
Not otherwise classified	3	0.46

Table 5: Histological pattern (n=346).

Histopathological pattern	N	Percentage (%)
Proliferative endometrium	118	34.10
Secretary endometrium	100	28.90
Disordered proliferative endometrium	50	14.45
Benign polyp	50	14.45
Chronic endometritis	8	2.31
Atrophic endometrium	4	1.15
Simple hyperplasia with atypia	1	0.28
Simple hyperplasia without atypia	10	2.8
Malignancy	5	1.44

DISCUSSION

AUB is the single most common complaint that reproductive-age women bring to their clinicians.[6]

In the present study, the highest incidence of AUB is observed in the age group 40-49 years. A similar incidence was reported in the study by Sinha et al and Choudhury et al.[12,13]

According to Sperof in postmenarcheal adolescents, anovulatory bleeding, coagulopathies, infections, and complications of pregnancy head the list. During the reproductive years, most abnormal bleeding results from anovulation, hormonal contraception, complications of pregnancy, infections, endocrine disorders, and polyps and myomas.[7]

In perimenopausal women, anovulation, benign uterine neoplasia, and endometrial hyperplasia cause the majority of problems, and in postmenopausal women, vaginal/endometrial atrophy and hormone therapy are the most common causes of abnormal bleeding; only about 10% of postmenopausal bleeding results from endometrial cancer.[7]

In present study, the most common clinical presentation of AUB was metrorrhagia in 56.8% whereas in the study by Nair et al the menorrhagia was the commonest bleeding pattern.[14] According to Sperof, Myomas generally cause HMB, which is mediated by alteration to the usual hemostatic mechanisms of the uterus through changes in vascular compression and the release of vasoactive growth factors. The two-thirds of women with endometrial polyps will experience AUB, with intermenstrual bleeding and heavy menses as the most common patterns.[8] Women with adenomyosis are more likely to experience heavy menses but may instead have intermenstrual bleeding (or dysmenorrhea alone). Women with malignancy or hyperplasia may have a variety of abnormal bleeding patterns, including intermenstrual bleeding, frequent menses, or heavy or prolonged bleeding.[7] In our study, on ultrasonography the commonest finding was leiomyoma uterus (28.15%) followed by increased endometrial thickness (18.46%) where as in the study by in the study by Sinha et al and Choudhury et al the normal scan was observed in maximum number of cases.[12,13] All the cases were classified as per PALM-COEIN classification. In present study maximum incidence found was of AUB-L followed by AUB-O. In our study the most common histological pattern was proliferative which was similar to the study by Kinake et al.[15]

Limitations

The limitations of the study are that the management of the patients was not included in this study. Neither the invasive diagnostic modalities nor the treatment modality is studied in the population group.

CONCLUSION

The prevalent causes of AUB vary with age. So, all the patients presenting with AUB to the gynaecology department were included in the study irrespective of age. The information presented in this study adds to our understanding of patterns of the AUB. The FIGO classification system (PALM-COEIN) was used in order to standardize terminology, diagnosis and investigations in women presenting with AUB. Endometrial sampling is a simple and cost-effective method accurate diagnosis and management of AUB.

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