# Clinical profile and management of patients with abnormal uterine bleeding

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**Abstract:**

**Background:**Global prevalence of abnormal uterine bleeding (AUB) ranges from 3%-30% among women 15-45 years. It is necessary to rule out any pathological condition that may be responsible for AUB so that it can be corrected at the earliest.

**Objective:**To study and review various causes, diagnostic and treatment modalities in evaluating abnormal uterine bleeding

**Methods:**Hospital based cross sectional study was carried out among 240 women with AUB. History, examination, USG pelvis and relevant examination was carried out. PALM-COEIN criteria was used to classify AUB. Appropriate management was followed.

**Results:**Prevalence of AUB was 19%. Majority belonged to 31-40 years. 21.7% had hypertension. Majority (58.3%) presented with heavy menstrual bleeding. 60% had AUB for 3-6 months.Per speculum examination showed that 11.7% had polyp and 22.1% had cervical erosions. On per vaginal examination, 52.9% had bulky uterus. On USG examination, 23.8% were found to have fibroids.Most common histopathological diagnosis was proliferative phase in 19.6% of the cases.55% of the women were found to have polyp followed by leiomyoma in 25% of the cases as per PALM criteria while as per COEIN criteria, most common cause of AUB was endometrial in 21.3% of the cases followed by ovulatory in 13.8% of the cases.70% cases of AUB could be managed conservatively while surgery was required in 27.9% of the cases; however, five cases resolved without any sort of intervention.

**Conclusion:**Prevalence of AUB was high in the study population. Age 31-40 years, associated co-morbidities, obesity and lower-class women had higher prevalence of AUB. It can be managed conservatively in most of the cases.

**Key words:** prevalence, abnormal uterine bleeding, women, polyp, fibroid

## INTRODUCTION

Endometrial shedding as an effect of progesterone at regular intervals and at definite cycles is defined as menstruation. The shedding occurs at about every 28 days. For a woman, this

menstruation is experienced from initiation of menstruation in her life (menarche) till it completely stops (menopause). Bleeding occurs during approximately four days of menstrual cycle. Any deviation from this normal pattern of menstrual bleeding is termed as abnormal uterine bleeding (AUB). It is characterized by variation in the flow duration, flow heaviness, regularity and frequency. [1]

It has been estimated that the global prevalence of AUB ranges from 3% to 30% among women of age 15-45 years. It is not clear as to why this prevalence is so widely varied. But it definitely varies with age. It is more commonly seen in the adolescent age group and the later part of life i.e. fifth decade. Among all the gynaecological disorders, AUB has a special space due to its direct impact on the women's life. [2]

Abnormalities of the menstruation are not rare for females and sometimes they are physiological in nature. But whenever a woman presents with such an abnormality, it is necessary to rule out any pathological condition that may be responsible for AUB so that it can be corrected at the earliest. [3]

As there was no system of classification of the AUB, it was difficult to attribute the causes and manage cases. Hence to overcome this problem, the "International Federation of Obstetrics and Gynecology (FIGO)" have given a standardized classification in the year 2009 and it was called FMDG "(FIGO Menstrual Disorders Group)". [4]

AUB are evaluated so that a particular diagnosis can be reached quickly and accordingly the person should be treated to give her a prompt relief. AUB can be further evaluated by various diagnostic techniques based on the proper history and thorough clinical examination which forms a base for the evaluation. [5]

In spite of availability of the data on AUB, there is need to have more and more data on etiology, clinical presentation, diagnosis and management of AUB. Hence this study was undertaken to study and review the various causes, diagnostic and treatment modalities in evaluating abnormal uterine bleeding

**MATERIAL AND METHODS**

**Study design:** Present study was hospital based cross sectional study

**Study setting:** The present study was conducted at a tertiary teaching hospital, Owaisi Hospital and Research Centre attached to Deccan college of medical sciences – in Hyderabad Telangana

**Study period:** July 2018 to July 2019

**Study population:** 240 patients selected by using the pre applied proforma between age group of 21- 60 years attending gynaecological OPD with symptoms of AUB were taken for analysis

**Ethical considerations:** The Institution Ethics Committee permission was obtained. Written informed consent was taken from all study eligible participants. All cases were given appropriate treatment.

**Data collection:** Pre designed, pre tested, semi structured study questionnaire was used to collect the data.

**Inclusion criteria**

1. Patients attending Gynecologyclinic presenting with AUB with complaints of AUB
2. Age group between 21 to 60 years

**Exclusion criteria**

1. Pregnancy and pregnancy related conditions.
2. Females less than age 21 and more than 60.
3. women having vulval and vaginal lesions

**Methodology**

Written informed consent was obtained from all eligible patients. Detailed history like demographic characteristics, and other relevant details were recorded. Thorough clinical examination including general examination, systemic examination and gynaecological examination to assess the cervix, external genitalia, adnexa and uterus was performed for each and every included patient. Ultrasonography (USG) of the pelvis was carried out to locate any pathology in the uterus and adnexa. Whenever indicated, biopsy from the endometrium or specimen of the hysterectomy were sent for histopathology examination for further evaluation of AUB.

"FIGO classification system [PALM-COEIN ("polyp; adenomyosis; leiomyoma; malignancy and hyperplasia; coagulopathy; ovulatory dysfunction; endometrial; iatrogenic; and not yet classified")] for causes of abnormal uterine bleeding in non-gravid women of reproductive age" [6] was used to classify the causes of the AUB. Histopathology findings were used to correlate with the clinical diagnosis of the abnormal uterine bleeding. For structural abnormalities PALM classification was used and when there are no structural abnormalities, then COEIN classification was followed. [6]

Baseline and necessary and indicated investigations were carried out for the study subjects.

**Statistical analysis:** The data was entered in the Microsoft Excel worksheet and analysed using proportions

**RESULTS**

Out of the 15,350 patients attending OPD from July 2018 to July 2019, the prevalence of AUB was found to be 19% (2916) women. Patients belonging to 21-60 years of age group were in this study, a sample size of 240 patients were taken into the study after considering the exclusion criteria.

**Table 1: Distribution of study subjects as per baseline characteristics**

| Characteristics | | Number | % |
|---|---|---|---|
| Age (years) | 21-30 | 42 | 17.5 |
| | 31-40 | 76 | 31.7 |
| | 41-60 | 62 | 25.8 |
| | 51-60 | 60 | 25 |
| Marital status | Married | 232 | 96.7 |
| | Unmarried | 8 | 3.3 |
| Parity | Nulliparous | 4 | 1.7 |
| | 1 | 34 | 14.2 |
| | 2 | 80 | 33.3 |
| | 3 | 82 | 34.2 |
| | 4 and more | 40 | 16.7 |
| Socio-economic status | Lower | 88 | 36.7 |
| | Lower middle | 75 | 31.3 |
| | Upper middle | 49 | 20.4 |
| | Middle | 28 | 11.7 |
| Body mass index (kg/m$^2$) | Underweight | 4 | 1.6 |
| | Normal | 47 | 19.6 |
| | Overweight | 138 | 57.5 |
| | Obese | 51 | 21.3 |

Table 1 shows distribution of study subjects as per baseline characteristics. Majority of women belonged to the age group of 31-40 years. 96.7% were married. 36.7% belonged to the lower social class. 21.3% were obese and 57.5% were overweight.

**Table 2: Distribution of study subjects as per clinical presentation**

| Clinical presentation | | Number | % |
|---|---|---|---|
| Associated co-morbidities | Hypertension | 52 | 21.7 |
| | Diabetes | 40 | 16.7 |
| | Thyroid disease | 42 | 17.5 |
| | Polycystic ovarian syndrome | 43 | 17.9 |
| Symptoms | Heavy menstrual bleeding | 140 | 58.3 |
| | Frequent Heavy menstrual bleeding | 47 | 19.6 |
| | Inter-menstrual bleeding | 16 | 6.7 |
| | Amenorrhea followed by Heavy menstrual bleeding | 8 | 3.3 |
| | Hypomenorrhea | 10 | 4.2 |
| | Post menopausal bleeding | 19 | 7.9 |
| Duration of AUB (months) | 1-3 | 60 | 25 |
| | 3-6 | 144 | 60 |
| | > 6 | 36 | 15 |

Table 2 shows distribution of study subjects as per clinical presentation. 21.7% had hypertension. Majority of women (58.3%) presented with heavy menstrual bleeding. 60% of women had AUB for 3-6 months.

**Table 3: Distribution of study subjects as per examination findings**

| Examination findings | | Number | % |
|---|---|---|---|
| Per speculum examination findings | Polyp | 28 | 11.7 |
| | Hypertrophied cervix | 33 | 13.8 |
| | Cervical erosions | 53 | 22.1 |
| | Healthy | 126 | 52.5 |
| Per vaginal examination findings | Normal | 97 | 40.4 |
| | Bulky uterus | 127 | 52.9 |
| USG findings | Polyp | 24 | 10 |
| | Fibroids | 57 | 23.8 |
| | Thickened endometrium | 52 | 21.7 |
| | Polycystic ovarian syndrome | 32 | 13.3 |
| | Bulky uterus | 17 | 7.1 |
| | Adenomyosis | 14 | 5.8 |
| | Not significant | 44 | 18.3 |

Table 3 shows distribution of study subjects as per examination findings. Per speculum examination showed that 11.7% had polyp and 22.1% had cervical erosions. On per vaginal examination, 52.9% had bulky uterus. On USG examination, 23.8% were found to have fibroids followed by thickened endometrium in 21.7% of cases.

**Table 4: Distribution of study subjects as per histopathological diagnosis**

| Histopathological diagnosis | Number | % |
|---|---|---|
| Proliferative phase | 47 | 19.6 |
| Secretory phase | 15 | 6.3 |
| Cystic glandular changes polyp | 6 | 2.5 |
| Endometrial polyp | 20 | 8.3 |
| Adenomatous polyp | 4 | 1.7 |
| Secretory endometrium with leiomyomatous change | 37 | 15.4 |

| | | |
|---|---|---|
| Proliferative endometrium with leiomyomatous changes | 24 | 10 |
| Simple hyperplasia | 20 | 8.3 |
| Complex hyperplasia | 15 | 6.3 |
| Simple hyperplasia with atypia | 2 | 0.8 |
| Complex hyperplasia with atypia | 4 | 1.6 |
| Adenocarcinoma | 2 | 0.8 |
| Adenomyosis | 18 | 7.5 |

Table 4 shows distribution of study subjects as per histopathological diagnosis. Most common histopathological diagnosis was proliferative phase in 19.6% of the cases followed by Secretory endometrium with leiomyomatous change in 15.4% of the cases.

**Table 5: Distribution of study subjects as per PALM-COEIN criteria**

| Diagnosis | | Number | % | Notation |
|---|---|---|---|---|
| PALM | Polyp | 132 | 55 | AUB-P |
| | Adenomyosis | 18 | 7.5 | AUB-A |
| | Leiomyoma | 60 | 25 | AUB-L |
| | Malignancy (hyperplasia) | 30 | 12.5 | AUB-M |
| COEIN | Coagulopathy | 2 | 0.8 | AUB-C |
| | Ovulatory | 33 | 13.8 | AUB-O |
| | Endometrial | 51 | 21.3 | AUB-E |
| | Iatrogenic | 19 | 7.9 | AUB-I |
| | Not otherwise specified | 3 | 1.3 | AUB-N |

Table 5 shows distribution of study subjects as per PALM-COEIN criteria. 55% of the women were found to have polyp followed by leiomyoma in 25% of the cases as per PALM criteria while as per COEIN criteria, most common cause of AUB was endometrial in 21.3% of the cases followed by ovulatory in 13.8% of the cases.

**Table 6: Distribution of study subjects as per management**

| Management | Number | % |
|---|---|---|
| Medical | 168 | 70 |
| Surgical | 67 | 27.9 |
| Management not required of any kind | 5 | 2.1 |

Table 6 shows distribution of study subjects as per management. 70% cases of AUB could be managed conservatively while surgery was required in 27.9% of the cases; however, five cases resolved without any sort of intervention.

**DISCUSSION**

We found an incidence of 19% of AUB in the present study which is comparable to other studies who reported 17.9% [7] and 18.23%. [8] We observed that prevalence of some type of AUB was 45.8% among 30-50 years of age which is comparable to observations by Saheta A et al [9] who reported it to be 30% and also comparable to global prevalence which ranges from 3-30%. [10]

We noted that majority of the study subjects with AUB belonged to 31-40 years and this finding is in accordance with finding by Pathak S et al [11] who also found that maximum incidence was in the age group of 31-40 years (30.94%).

Majority of the women in the present study had parity three which is comparable with other studies. [12, 13] It was observed that 37% of women belonged to lower social class and similar observation was noted by Hooja N et al. [14] In the present study 57.6% were overweight and

21.6% were obese while Sharma AS et al [15] also noted that overweight women constituted 56.2% of total subjects.

We noted that 58% of women with AUB were overweight and obese while 22% had hypertension. Anupamasuresh Y et al [16] also found that 32.3% of their subjects had hypertension while diabetes was seen in 9.2% of the cases. We observed that 17.6% had thyroid disease which is comparable to study done by Deshmukh PY et al [17] where they noted that 9% had hypothyroidism while 18% were found to have sub-clinical hypothyroidism.

57.8% of women with AUB presented with heavy menstrual bleeding in the present study which is comparable to study by Anupamasuresh Y et al [16] also found that 79% of the cases had heavy menstrual bleeding and 73% had prolonged bleeding.

Polyps was found to be responsible for AUB in the present study which is comparable to study by Doraiswamy S et al [18] who fond it to be 11.2%. AUB-adenomyosis was observed in 7.5% of cases in the present study while Qureshi FU et al [19] found that it was seen in 15% of cases. We noted that in 24% of cases leiomyoma was present which is similar to study by Jonathan Amold AP et al. [20] In 23% of cases of AUB we noted that endometrial hyperplasia was present while Shrestha S et al [21] noted this in 44 cases in the age group of 41-50 years. Generally it is reported that in 13% of the cases, coagulopathies account for AUB, but we found it in only 2% of the cases which is similar to study by Qureshi FU et al. [19] We observed that cause of AUB in 13.6% of the cases was ovulatory dysfunction and Dangal G et al [22] also reported similar findings. In 21% of the cases in the present study, AUB was caused due to endometrial causes which is similar to study was Sajitha K et al [23] who found it to be 25%.

We observed that in 61.6% of the cases, AUB was attributed to structural causes while in 34.2% of the cases, it was attributed to functional causes. Betha et al [12] reported this as 60.4% and 39.6% respectively.

**CONCLUSION**

Prevalence of AUB was high in the study population. Age 31-40 years, associated co-morbidities, obesity and lower-class women had higher prevalence of AUB. It can be managed conservatively in most of the cases. It is imperative that a woman presenting to the gynaecology with complaints of abnormal uterine bleeding be evaluated properly so as to provide effective management either medical or surgical to improve her overall health and quality of life

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