

# A Study of Palm-Coein Classification of Abnormal Uterine Bleeding

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## Abstract

**Background:** Abnormal uterine bleeding is the commonest presenting symptom and major gynecological problem responsible for as many as one-third of all out patient gynecologic visit. Abnormal uterine bleeding is defined as bleeding from the uterine corpus that is abnormal in regularity, volume, frequency, or duration and occurs in absence of pregnancy and may be acute or chronic. Abnormal Uterine Bleeding (AUB) is a significant debilitating clinical condition and affects 14-25% of women of reproductive age and up to 50% of perimenopausal women.

**Methods:** This prospective observational study was conducted by the Department of OBG at KMCT medical college and research institute from January 2019 to December 2019. A total of 180 patients were included in the study. A comprehensive history taken from each patient followed by a thorough physical examination and were recorded in the pre-designed profoma and analyzed.

**Results:** The maximum 61 (33.9%) were in the age group of 46-50 years followed by 58 (32.2%) from the age group 41-45 years. The mean age of the patients was 44.23 (SD12.76) years ranging from 30 to 50 yrs. The difference in clinical and histopathological diagnosis of the categories AUB-P, AUB-A, AUB-L and AUB-M were not statistically significant but was highly significant in the category AUB-M and AUB-E (<0.001).

**Keywords:** Abnormal uterine bleeding; Palmcoein; Figo; Polyp

## Introduction

Abnormal uterine bleeding is the commonest presenting symptom and major gynecological problem responsible for as many as one-third of all out patient gynecologic visit.<sup>1</sup> Abnormal uterine bleeding is defined as bleeding from the uterine corpus that is abnormal in regularity, volume, frequency, or duration and occurs in absence of pregnancy<sup>2</sup> and may be acute or chronic. Abnormal Uterine Bleeding (AUB) is a significant debilitating clinical condition and affects 14-25% of women of reproductive age and up to 50% of perimenopausal women.<sup>3,4</sup>

AUB was associated with general inconsistencies in the nomenclature, causes, investigations a need for simpler terminologies and many cases with abnormal uterine bleeding may undergo unwarranted hysterectomy, thus to simplify the investigations and clinical management which are primarily dependent upon attaining a correct etiological diagnosis, FIGO (2011) approved a new classification system PALM-COEIN for causes of AUB in non gravid women of reproductive age group.<sup>5,6</sup> Therefore, this study aimed to assess the causes of AUB in age group of 30-50 yrs women in context to PALM-COEIN classification system and to establish a clinic-pathological correlation of various causes of AUB.

## Materials and Methods

### Source of Data

This prospective observational study was conducted by the Department of OBG at KMCT medical college and research institute from January 2019 to December 2019. A total of 180 patients were included in the study on the basis of inclusion criteria.

### Inclusion Criteria

All women in age groups (30-50 yrs) with abnormal uterine bleeding with heavy menstrual bleeding, Prolonged menstrual bleeding, Heavy and prolonged menstrual bleeding, Frequent menstrual bleeding

### Exclusion Criteria

1. Patients who are pregnant, case of abortion/ectopic/molar pregnancy.
2. Patients with postmenopausal bleeding
3. Patients with vulval and vaginal lesions
4. Patients with cervical lesions and with Pap smear positive for cervical malignancy
5. Prolapsed uterus with decubitus ulcer
6. Bleeding due to local trauma, recent uterine perforation, foreign body as pessary, IUCD users

### Procedure

The detailed history and proper clinical findings were entered in a proforma case sheet. The clinical examination was done and necessary investigations were carried out to establish the diagnosis. All patients were subjected for transvaginal ultrasound to detect any pathology. Endometrial biopsy and hysterectomy specimens were obtained wherever needed. Gross and microscopic features on hysterectomy specimens were noted. The causes were categorised as per PALM-COEIN classification. Histopathological evaluation (HPE) was done for reallocation of the categories. The various categorised causes of AUB were then, correlated with histopathological based diagnosis.

### Statistical Analysis

The data was analyzed using SPSS software version 16. Descriptive statistics like mean and percentages were used to interpret the results.

## Results

The results of clinical study of 180 cases AUB studied at our hospital during the period of March 2017 to February 2018.

**Table 1:** Aub in Relation to Age.

Age	No of Patients	Percentage
30-35	20	11.1%
36-40	41	22.8%
41-45	58	32.2%
46-50	61	33.9%
Total	180	100

Out of 180 subjects enrolled into the study, maximum 61 (33.9%) were in the age group of 46-50 years followed by 58 (32.2%) from the age group 41-45 years. The mean age of the patients was 44.23 (SD12.76) years ranging from 30 to 50 yrs (Table 1).

**Table 2:** Relationship of Aub with Parity.

Parity	No of Patients	Percentage
Nulliparous	12	6.7%
1	149	82.8%
2	15	8.3%
3	4	2.2%
Total	180	100

When review of previous reproductive performance was studied, it was found that the maximum incidence of AUB (82.8%) occurred among primiparous followed by (8.3%) in multiparous (Table 2).

**Table 3:** Distribution of Bleeding Patterns.

Bleeding Pattern	No of Patients	Percentage
Heavy Menstrual Bleeding	130	72.2%
Prolonged Menstrual Bleeding	21	11.7%
Heavy And Prolonged Menstrual Bleeding	23	12.8%
Intermenstrual Bleeding	6	3.3%
Total	180	100

Heavy menstrual bleeding was the most common symptom accounting for 72.2% of patients followed by prolonged menopausal bleeding accounting for 11.7% with the least being infrequent menstrual bleeding (3.3%) (Table 3).

**Table 4:** Distribution of Cases As Per Clinical Diagnosis.

Diagnosis	No of Patients	Percentage
AUB-P (Polyp)	15	8.3%
AUB-A (Adenomyosis)	11	6.1%
AUB-L (Leiomyoma)	89	49.4%
AUB-M (Malignancy and hyperplasia)	26	14.4%
AUB-C (coagulopathy)	2	1.1%
AUB-O (Ovarian)	19	10.6%
AUB-E (Endometrial)	14	7.9%
AUB-I (Iatrogenic)	3	1.6%
AUB-N (Not yet classified)	1	0.6%
Total	180	100

The diagnosis based upon clinical findings were, majority of the patients belonged to AUB-L group with 49.4% followed by AUB-M(14.4%) group (Table 4).

**Table 5:** Distribution of Cases as Per Histopathological Diagnosis.

Diagnosis	No of Patients	Percentage
AUB-P (Polyp)	20	11.1%
AUB-A (Adenomyosis)	16	8.9%
AUB-L (Leiomyoma)	104	57.8%
AUB-M (Malignancy and hyperplasia)	33	18.3%
AUB-O (Ovarian)	4	2.3%
AUB-E (Endometrial)	3	1.6%
Total	180	100

The diagnosis based upon histopathological findings were, majority of the patients belonged to AUB-L group and AUB-M group accounting 57.8% and 18.3% (Table 5).

**Table 6:** Correlation Between Clinical And Histopathological Diagnosis.

Diagnosis	Clinical Diagnosis	Histopathological Diagnosis	P Value
AUB-P (Polyp)	15	20	0.76
AUB-A (Adenomyosis)	11	16	0.72
AUB-L (Leiomyoma)	89	104	0.86
AUB-M (Malignancy and hyperplasia)	26	33	0.69
AUB-O (Ovarian)	19	4	<0.001
AUB-E (Endometrial)	14	3	<0.001

The difference in clinical and histopathological diagnosis of the categories AUB-P, AUB-A, AUB-L and AUB-M were not statistically significant but was highly significant in the category AUB-M and AUB-E(<0.001) (Table 6).

## Discussion

Abnormal uterine bleeding continues to be one of the most common and perplexing problems in Gynaecological practice. It may present at any age between puberty and menopause. The highest incidence of AUB was noted in the 41-50 years age group (66.1%) in the present study which is in concordance with the results of the studies by Saraswathi D et. al.<sup>7</sup> who noted 49.3% in the same age group where as Das A et. al.<sup>8</sup> reported maximum incidence in 31-40 year. The highest incidence of

AUB was seen in primiparous (82.8%), which is in contrast with the results by Sreelakshmi U et. al.<sup>9</sup> where it was noted that the highest incidence was seen in multiparous. Heavy menstrual bleeding was the commonest type of bleeding (72.2%) which was in consistent with the studies done by Suneet k et. al.<sup>10</sup> The difference in clinical and histopathological diagnosis of the categories AUB-P, AUB-A, AUB-L and AUB-M were not statistically significant but was highly significant in the category AUB-M and AUB-E (<0.001) which was consistent with the studies done by Singh A et. al.<sup>11</sup> and Mishra D et. al.<sup>12</sup>

## Conclusion

From this study, we can conclude that AUB is one of the most common problem in women of all age groups in reproductive period. It is challenging gynecological problem caused by various endometrial pathologies. This classification system of Palmcoein helps to understand the various causes of AUB, gives simpler terminology, diagnosis and investigations of the causes of AUB and offers specific management.

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**Conflict of interest:** None declared

**Ethical approval:** The study was approved by the Institutional Ethics Committee.

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