

## Evaluation of Histopathological Reports of Abnormal Uterine Bleeding in Women at Tertiary Care Centre

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### Abstract

**Background:** Abnormal uterine bleeding (AUB) which is a significant clinical entity and its subgroup, heavy menstrual bleeding (HMB), are common conditions having a significant impact on the physical, social, emotional and/or material quality of life of the affected 14–25% of women of reproductive age.

**Aim of the Study:** To evaluate histopathological reports of abnormal uterine bleeding in women at tertiary care centres.

**Methodology:** The retrospective cohort study was carried out from June 2020 to June 2022 in the Department of Obstetrics and Gynecology at a tertiary medical teaching hospital at Medciti Institute of Medical Sciences, Medchal. Medical records of 100 cases of AUB were retrieved. A detailed history was taken and investigations were carried out.

**Results:** The age group of 36-50 years was commonly associated with AUB. Maximum no. of women 45 cases were para 2 (45 %) while 4 cases (4 %) were nulliparous, 1 case (1 %) was para 1, other 37 women were para 3 and the remaining 10 women were para 4 or more. Management was done by medical and surgical approaches for these women. D and C alone or D and C followed by hysterectomy was the surgical approach. Majorly 82 cases (82 %) were associated with secretory endometrium on histopathology and 18 (18 %) cases were associated with the proliferative type of endometrium.

**Conclusion:** The majority of endometrium was revealed by histopathology in the secretory phase and hysterectomy remained the commonest method of intervention.

**Keyword:** AUB, Age, Parity, Hysterectomy

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### Introduction

Abnormal Uterine Bleeding (AUB) is defined as any bleeding that is excessive in duration, frequency or amount for that patient. [1] Based on the volume of menstruation, regularity, frequency,

duration, chronicity, and timing related to reproductive status further definitions of AUB may be subdivided. AUB can occur at any age in various forms and has different modes of presentation. Abnormal

uterine bleeding during reproductive age can result from a broad spectrum of conditions ranging from physiological processes to malignant lesions involving organic, systemic, and hormonal responses. Abnormal uterine bleeding is the most common complaint encountered in the perimenopausal age group causing significant physical and mental morbidity and financial burden on these patients. [2] AUB interferes with a woman's physical, social, emotional and material quality of life. [3] Abnormal uterine bleeding is responsible for more than one-third of gynecologic consultations and nearly two-thirds of hysterectomies. [4] Fibromyoma, ovarian tumour, pelvic inflammatory disease (PID), adenomyosis, endometrial polyp, endometrial hyperplasia, endometrial carcinoma, hormonal imbalance (like hypothyroidism), or hypothalamic-pituitary diseases may be the causes of AUB. The term dysfunctional uterine bleeding was used because AUB occurs without any systemic causes or any organic lesions of the genital tract in a large number of patients. To recognize or identify the causative factors responsible is the key to successful clinical management which can be achieved by thorough clinical examination, histopathological examination and ultrasonography. Histopathological examination remains the only alternative to reach the diagnosis, after ruling out the organic causes when no systemic and pelvic cause is evident to the clinician. For practising pathologists endometrial interpretation could be quite challenging. To assess the histopathology of the endometrium for identifying the endometrial causes of AUB and correlate clinical findings of AUB with histopathology reports, this study was done. This study was done in women with abnormal uterine bleeding to evaluate the histopathological reports at the tertiary care centre.

## Methods

A retrospective cohort study was conducted at the tertiary medical teaching hospital at MediCiti Institute of Medical Sciences, Medchal in the Department of Obstetrics and Gynaecology. The study duration was from June 2020 to June 2022. Retrieval of the medical records of patients with abnormal uterine bleeding was done.

## Inclusion Criteria

1. All cases from perimenarchal to perimenopausal patients of abnormal uterine bleeding (Excessive duration, unpredictable, irregular, abnormal volume, and /or abnormal frequency of menses and intermenstrual bleeding)
2. Patients willing to participate and follow up

## Exclusion Criteria

1. An established diagnosed case of pregnancy
2. Cervical cause for vaginal bleeding cases.

Medical records of 100 AUB patients were considered. The records were evaluated and histopathological findings were correlated. Endometrial material was obtained by conventional D and C or hysteroscopy-guided endometrial biopsy as per the records. In all suspected cases of uterine malignancy and endometrial hyperplasia, an endometrial sample was obtained. Possible underlying causes have been categorized and clinical diagnosis then correlated with a histology-based final diagnosis as per the histopathological findings. In the case of AUB-O and AUB-E, endometrial histology was associated with the clinical assignment. Data were analysed and frequencies and percentages were presented in descriptive statistics.

## Results

The total no. of the medical record of the cases for AUB retrieved was 100. In the 36- 50 years of age group, AUB was commonly seen in our study. The age group of <35 years had 8 cases (8%), the age group 51 years and above had 15 (15

%) cases, the age group 36- 40 years had 26 (26 %) cases, the age group 41- 45 years had 26 (26 %) cases and the age group 46- 50 years had 25 (25%) cases . (Table 1) Maximum no. of women 45 cases were para 2 (45 %) while 4 cases (4 %) were nulliparous, 1 case (1 %) was para 1, other 37 women were para 3 and the remaining 10 women were para 4 or more. (Table 2) Menorrhagia, post-menopausal bleeding, poly menorrhagia and intermenstrual bleeding were found in 66 (66 %), 16 (16 %), 12 (12 %) and 6 (6 %) cases respectively. (Table 3)

Leiomyoma (AUB-L) was assigned to be the major aetiology in 51/100 (51 %) followed by AUB E in 18/100 (18 %), AUB O in 13/100 (13 %), AUB P in 11/100 (11 %), AUB N in 4/100 (4 %) and

the least of AUB A and C found in 2/100 (2 %) and 1/100 (1 %) respectively in relation to the clinical diagnosis classified according to PALM COEIN classification. (Table 4) It was observed that the majority of the cases were investigated by D and C in 51 (51 %) of the cases and the remaining 49 (49 %) of the cases using hysteroscopy-guided endometrial biopsy.

(Table 5) We studied out of 100 cases, majorly 82 cases (82 %) were associated with secretory endometrium on histopathology and 18 (18 %) cases were associated with the proliferative type of endometrium. (Table 6) In the categories of AUB, histopathology could diagnose more cases in comparison with clinical-based diagnosis.

**Table 1: Distribution of the cases as per the age group**

Age group	Number	Percentage (%)
<35	8	8.0
36-40	26	26.0
41-45	26	26.0
46-50	25	25.0
51 and above	15	15.0
Total	100	100.0

**Table 2: Distribution of the cases as per the parity**

Parity	Number	Percentage (%)
Nulliparous	4	4.0
1	4	4.0
2	45	45.0
3	37	37.0
4 and above	10	10.0
Total	100	100.0

**Table 3: Distribution of cases as per the complaint**

Complaint	Number	Percentage
Intermenstrual bleeding	6	6.0
Menorrhagia	66	66.0
Postmenopausal bleeding	16	16.0
Poly menorrhagia	12	12.0
Total	100	100.0

**Table 4: Distribution of the cases as per the clinical diagnosis (PALM-COEIN Classification)**

Diagnosis	Number	Percentage (%)
AUB O	13	13.0
AUB E	18	18.0

AUB P	11	11.0
AUB A	2	2.0
AUB C	1	1.0
AUB L	51	51.0
AUB N	4	4.0

**Table 5: Distribution of the cases as per the procedure followed for investigations**

Procedure	Number	Percentage (%)
D & C	51	51.0
Hysteroscopy-guided endometrial biopsy	49	49.0
Total	100	100.0

**Table 6: Distribution of the cases as per the histopathology-based diagnosis**

Histopathology	Number	Percentage (%)
Proliferative endometrium	18	18.0
Secretory endometrium	82	82.0
Total	100	100.0

## Discussion

77 % of cases belonged to 36-50 years as revealed by the age distribution of AUB in our study. Most of these patients in their climacteric period could be a reason for the increased incidence of abnormal uterine bleeding in this age group (36-50 years). Similarly, the study conducted by Kinake et al., 2021 showed 68.88 % cases of AUB in 31 to 50 years which coincides with the present study. There were 45 cases (45 %) were para 2, 37 cases (37 %) were para 3, 10 cases (10 %) were para 4 and more, 4 (4 %) were nulliparous, and 4 cases (4 %) were para 1. [5] Whereas in the study of Jagdale et al., 2020 the incidence of AUB increased as the parity increased. There were 15 cases (8.24%) that were nulliparous, and out of 91.16% of women, 38 (20.87%) were para 1-2 and 75 (38.46%) were para 3-4 and 54 (29.67%) were para 5 or more. [6] Similarly, the incidence of AUB increased as the parity increased according to the prospective study conducted by Ramachandran T et al. [7]

In our study, patients presented with different types of AUB; the commonest presenting feature was menorrhagia (66 %). Nayak et al., 1996 found menorrhagia in 49.1% of cases similar to our study. [8]

This study focuses to categorize the patients of AUB as per the PALM- COEIN classification and is similar to studies by Khrouf et al., [9] Munro et al., [10] Madhra et al., [11] Bahamondes and Ali. [12] With this, necessary investigations can be easily done and better management of specific causes can be planned. According to the study done by Gouri et al. in May'16, the category which had the most patients was ovulatory dysfunction (27%), followed by leiomyoma (24.7%). [13] In a study done by Goel P et al., ovulatory dysfunction was found to be the most common cause of AUB (28.3%) followed by leiomyoma (22.7%). [14] "In the study done by Qureshi and Yusuf in 2013, leiomyoma was the most common category (25%) followed by ovulatory dysfunction (24%). [15] In the study by Ratnani R et al. in Sep'17, leiomyoma (35%) was the most common cause of AUB, followed by malignancy and hyperplasia, adenomyosis and ovulatory dysfunction". Similarly in the present study, leiomyoma that is AUB L was found in 51% of women, AUB E (18%), followed by AUB O 11%. In our study, secretory endometrium was majorly detected that is in 82% of cases and proliferative endometrium was detected in 18 % of cases. [16] Novak et al. found

metropathia type of bleeding in 9% menorrhagia in 51.5%, polymenorrhoea and irregular bleeding in 45% of their 66 cases of hyperplastic endometrium. [17] According to Takreem et al. most frequent clinical diagnosis of endometrial hyperplasia was menorrhagia. (53.3%). [18] Bhattacharjee “observed irregular bleeding in 56.2%, menorrhagia in 31.2% and metropathia type of bleeding in 12.5% of cases in his series of 32 cases having proliferative endometrium”. [19] Menorrhagia was suffered by majority of these patients and the endometrial histology was either proliferative or secretory and showed no abnormality. Leiomyoma was the significant feature in 51% of these cases clinically. In conclusion, a valuable approach to a clinical diagnosis particularly in cases with menorrhagia and metrorrhagia is the histopathological examination of endometrium obtained by curettage. [20] A significantly more cases having structural causes (PALM) of AUB on the histopathological basis in comparison with the clinical assignment of the PALM component are disclosed by different components of PALM side and AUB-O along with AUB-E categories of the COEIN according to the clinicopathological correlation. The importance of histological examination as an approving diagnostic tool in the PALM component of AUB was highlighted by this finding. Endometrial sampling was done by D and C alone in 51 (51 %) cases and hysteroscopy-guided endometrial biopsy in 49 (49 %) of cases. D and C, endometrial aspiration and hysteroscopy are used for endometrial sampling. The gold standard is the hysteroscopy guided endometrial sampling. D & C is also an effective way to investigate uterine bleeding in absence of clinically obvious uterine pathology and systemic cause though hysteroscopes are not available.

### Conclusion

Majority of the endometrium is in the secretory phase as revealed by the histopathology. The commonest method of intervention is the hysterectomy. To encourage teaching and implementation of alternative procedures to ensure that women receive the maximum benefits with the least morbidity should be the responsibility of healthcare professionals.

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