

## HISTOLOGICAL STUDY OF ENDOMETRIUM IN ABNORMAL UTERINE BLEEDING IN PERI-MENOPAUSAL WOMEN

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### ABSTRACT

**Background:** Abnormalities of menstrual cycle are quite common in the peri-menopausal age group. Largely, these are part of the normal physiological changes occurring in the women in this age group. Sometimes, these may be due to some pathological causes resulting in abnormal uterine bleeding. In this study our aim was to find the different conditions of endometrium causing abnormal uterine bleeding and the frequencies of different known predisposing factors. **Materials and Methods:** This was a descriptive observational study with cross-sectional design. The study group included 135 patients in the peri-menopausal age group with age 39 years and above, presenting with abnormal uterine bleeding. The patients were selected by purposive sampling technique and questioned with the help of a pre-tested semi-structured questionnaire. **Result:** The present study found that proliferative endometrium was the most common histological finding (30.37%) of abnormal uterine bleeding in peri-menopausal women. Very few cases of endometrial carcinoma was found in peri-menopausal women. Increased parity, bad menstrual history and hypertension were found to be very closely related to abnormal uterine bleeding. **Conclusion:** In peri-menopausal women, proliferative endometrium was the most common histological finding of abnormal uterine bleeding. It was also found that endometrial carcinoma was uncommon in peri-menopausal women.

## INTRODUCTION

Abnormal Uterine Bleeding (AUB) is any bleeding from the genital tract which is a deviation from the normal menstrual cycle in quantity, frequency or cyclicity. It is a common disease in gynecology accounting for 30-40% cases of out-patient department.

The International Federation of Gynecology and Obstetrics developed a classification system (PALM-COEIN) for causes of the AUB in non-gravid women.<sup>[1]</sup> PALM-COEIN acronym stands for Polyp, Adenomyosis, Leiomyoma, Malignancy and Hyperplasia, Coagulopathy, Ovulatory dysfunction, Endometrial, Iatrogenic and N= Not otherwise classified.

Studies have related various factors pre-disposing to AUB such as parity, obesity, bad menstrual history.<sup>[2-4]</sup> Upto 33% of women visited to the gynecological out-patient clinics have AUB and this proportion rises to 69% in peri-menopausal age group.<sup>[5]</sup>

There are structural or functional etiologies for AUB. Patients may present with menorrhagia,

polymenorrhea, metrorrhagia and menometrorrhagia bleeding.

This study was done for evaluation of changes in endometrium in peri-menopausal women as it is important to confirm the nature of the lesion and to rule out malignancy.

## MATERIALS AND METHODS

This study was conducted in a Tertiary Care Hospital in West Bengal, India, taken over a period of 2 years from March, 2021 to April, 2023. It was a descriptive observational study with cross-sectional design. The study was done on 135 patients.

The Inclusion criteria included age 39 years or above, menopause not yet occurred, presenting with Abnormal Uterine Bleeding and admitted in gynecology ward for hysterectomy or dilatation & curettage (D&C).

Patients with cervical lesions, fibroid, functional ovarian tumour, haemostatic pathology, acute pelvic inflammatory disease, complications of pregnancy, atrophic vaginitis, prolapsed with decubitus ulcer and abnormal uterine bleeding as a complication of

hormonal treatment as well as inadequate specimens were excluded from the study.

The patients were selected by purposive sampling technique. A detailed clinical history including age and menstrual status was taken. Body Mass Index (BMI) of the patients were calculated. Other relevant findings of general and systemic examination were recorded.

Endometrial samples for histo-pathological examination were obtained from hysterectomy and dilatation & curettage (D&C). specimens were received in 10% formalin. These were studied grossly and multiple sections (for hysterectomised patients) were taken from each specimen for tissue processing. 4 to 5 micron thick paraffin embedded sections were taken and stained by Haemotoxylin & Eosin. Histological study of the endometrial patterns were carried out.

## RESULTS

A total of 135 numbers of endometrium samples were received during the study period. Patients were categorized into age groups. Among the 135 perimenopausal women, the most common age group [chart] was 45-49 years constituting 44.4% (60 women) followed by 39-44 years age group constituting 37.8% (51 women). No peri-menopausal women were found above 54 years. Abnormal uterine bleeding was highest in parity 3 (33.33%) followed by grand multipara (31.11%).

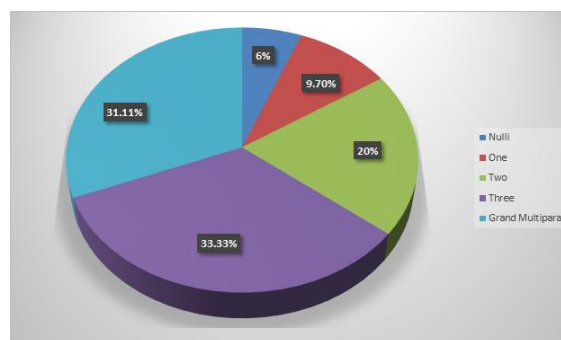


Figure 1: Parity of Peri-Menopausal Women

Table 1: Distribution of subjects according to age

Age Group (Years)	Perimenopause (%)
39-44	51 (37.8%)
45-49	60 (44.4%)
50-54	24 (17.8%)
55-59	0 (0%)
Total	135 (100%)

The histo-pathological evaluation of the endometrium that most cases were proliferative [41 women (30.37%)]. The other common histo-pathological diagnosis were secretory [27 women (20%)] and adenomyosis [23 women (17.04%)]. Hyperplasia without atypia was found in 18 women

(13.33%), disordered proliferative in 14 women (10.37%) and hyperplasia with atypia in 9 women (6.67%).

Endometrial carcinoma was found in least number of women. It was found in only 3 women (2.22%).

Table 2: Histopathological diagnosis of Abnormal uterine bleeding in peri-menopausal women

Histopathological Diagnosis	No. of Cases	Percentage
Proliferative	41	30.37%
Secretory	27	20%
Disordered Proliferative	14	10.37%
Hyperplasia Without Atypia	18	13.33%
Hyperplasia With Atypia	09	6.67%
Adenomyosis	23	17.04%
Endometrial Carcinoma	03	2.22%
Total	135	100%

Then we found out the frequencies of different parameters occurring in women of our study group. It was found that a history of menstrual abnormality was present in 75 women (55.56%), hypertension

was found in 63 women (46.67%), obesity in 45 women (33.33%) and diabetes in 42 women (31.11%). Most of the women have more than one parameters found in them.

Table 3: Frequencies of different parameters occurring in AUB (n=135)

Parameters	Number Of Cases	Percentage
Hypertension	63	46.67%
Diabetes	42	31.11%
Obesity	45	33.33%
History Of Menstrual Abnormality	75	55.56%

## DISCUSSION

The endometrium is a remarkably dynamic tissue. It undergoes regular cyclical changes in response to the recurrent hormonal changes of the ovulatory cycles. Abnormal uterine bleeding is a very common gynecological condition that affects all age groups.<sup>[6]</sup> International Federation of Gynecology and Obstetrics developed a classification system (PALM-COEIN) for causes of AUB, as already mentioned in the introduction.

In the present study among peri-menopausal women, the most common age group presenting with AUB was 45-49 years age group (44.4%) followed by 39-44 years age group (37.8%).

Parity is an important parameter in abnormal uterine bleeding. In the present study, in the patients with abnormal uterine bleeding, most either have parity 3 (33.33%) or grand multipara (31.11%). This is in close congruity with studies done by Archana Bhosle, et al,<sup>[2]</sup> where parity 3 (27.8%) and grand multipara (32.18%) were the most common.

In the present study, the histopathological evaluation of the endometrium showed that most cases were proliferative [41 women (30.37%)]. Secretory endometrium [27 women (20%)] was the second most common histopathological finding. Hyperplasia without atypia was found in 18 women (13.33%) and hyperplasia with atypia was found in 9 women (6.67%). The results of the present study showed a considerable similarity with a study done by Rajshri P. Damle, et al,<sup>[7]</sup> in which, in the peri-menopausal age group proliferative endometrium (35.22%) was the predominant histopathological pattern followed by endometrial hyperplasia (23.86%).

In the present study, only 3 cases (2.22%) of endometrial carcinoma were found in perimenopausal women. The 9 women having hyperplasia with atypia were at risk of developing malignancy. Similar result was found in a study by Rajshri P. Damle, et al.<sup>[7]</sup>

In this study, we have also tried to find the frequencies of different parameters related to abnormal uterine bleeding. It was found that history of menstrual abnormality was present in 75 women (55.56%), hypertension was found in 63 women (46.67%), obesity in 45 women (33.33%) and diabetes in 42 women (31.11%). Most of the women have more than one parameters found in them. So, we can say that most of the women with abnormal uterine bleeding had history of menstrual abnormality and a significant number of them have hypertension. So, this study shows that the above two parameters are closely related to abnormal uterine bleeding.

## CONCLUSION

Abnormal uterine bleeding is a very common gynecological condition affecting peri-menopausal group. The present study found that proliferative endometrium was the most common histological finding of abnormal uterine bleeding in perimenopausal women. It was also found that endometrial carcinoma was uncommon (2.22%) in peri-menopausal women whereas 9 women (6.67%) having hyperplasia with atypia were at the risk of developing endometrial carcinoma. Abnormal uterine bleeding was found to be more common in women with increased parity. Finally, history of menstrual abnormality and hypertension are the two parameters that were found to be closely related to abnormal uterine bleeding. Further research in this topic will prove to be much helpful in the management and treatment of women suffering from abnormal uterine bleeding. Thus, this study would have much clinical importance regarding the management of abnormal uterine bleeding in perimenopausal women.

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