

Original research

# A PROSPECTIVE STUDY OF ENDOMETRIAL CARCINOMA IN PATIENTS WITH ABNORMAL UTERINE BLEEDING

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## Abstract:

**Background:** The most frequent presenting symptom in the gynecology outpatient department is abnormal uterine bleeding (AUB). Endometrial sampling may be effectively the initial diagnostic step in AUB, though it frequently presents a difficult interpretation for pathologists in practice. This study was done to evaluate the histopathology of endometrium for the purpose of identifying the endometrial causes of AUB. Additionally, we tried to observe the incidence of various pathologies in different age groups presenting with abnormal uterine bleeding.

**Materials and methods:** This is a prospective study done on cases of AUB who underwent endometrial biopsy from August 2020 to August 2021 in the department of pathology at Kakatiya Medical College, Warangal, and Telangana, India. All the biopsies were routinely processed and a histopathological diagnosis was made. A statistical analysis between age of presentation and specific endometrial causes was done using the Chi-square test.

**Results:** The most common age group presenting with AUB was 35–72 years old. Out of 133 cases studied, 48% of cases were found to be proliferative endometrium, 28% of cases

were of secretory endometrium, 2% of cases were of atrophic endometrium, 3% were of irregular maturation, 17% were of simple hyperplasia, and 2% were of endometrial carcinoma. Endometrial causes of AUB and age pattern was statistically significant with P value<0.05.

**Conclusion:** Endometrial lesions are associated with particular ages. AUB is more frequently dysfunctional in perimenopausal women, so when they are in the reproductive age range, they should first rule out pregnancy-related issues. This study's significantly high incidence of aberrant proliferative patterns suggests that these patients present at an early stage.

**Keywords:** Abnormal uterine bleeding, endometrial carcinoma, prospective Study

## Introduction

Abnormal uterine bleeding (AUB) refers to any non-physiological uterine bleeding.<sup>1, 2</sup> It affects a great majority of women and is one of the most common indications for performing endometrial biopsies and curettage.<sup>3</sup> Endometrial biopsy or curettage could be a safe and effective diagnostic step in the evaluation of abnormal uterine bleeding after ruling out medical causes.<sup>4, 5</sup> It is essential to establish the cause of AUB in order to plan an appropriate treatment modality.

The present study was carried out to screen all the patients with AUB for endometrial carcinoma and to know the incidence of endometrial carcinoma in AUB patients.

## Materials and Methods

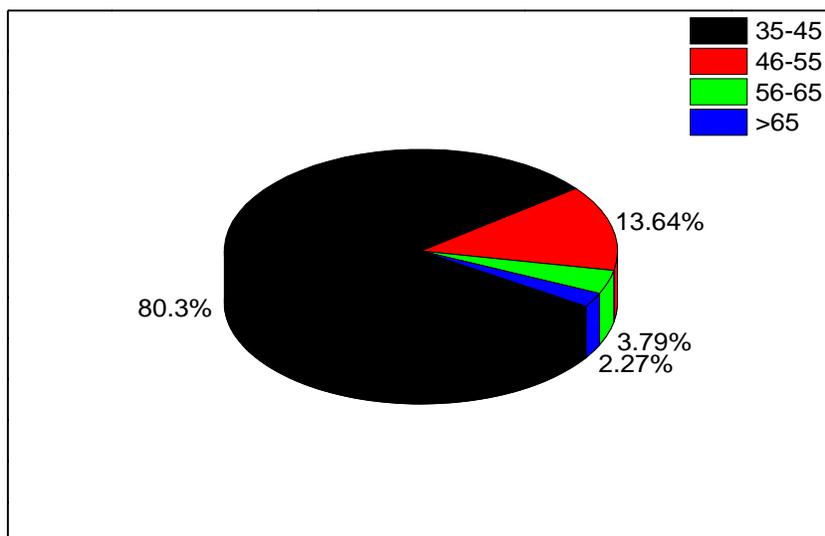
This is a prospective study done on cases of AUB who underwent endometrial biopsy from August 2020 to August 2021 in the department of pathology at Kakatiya Medical College, Warangal, and Telangana, India. Patients were selected based on clinical details. All the biopsies were routinely processed and a histopathological diagnosis was made. A total of 133 cases were studied. The patient's age between 35-72 years was included in the study. Endometrial biopsy done in cases of infertility, pelvic infections due to TB curetting done after abortion, and IUCD are excluded from the study. The clinical details, such as age, last menstrual period, menstrual complaints, duration of bleeding, hormone therapy, and other details, was obtained. All specimens were transported in 10% neutral buffered formalin to the pathology laboratory. The gross morphology was recorded with the total submission of endometrial samples, and representative bits were taken from the hysterectomy specimens. The tissue fragments were processed in prepared paraffin blocks. Tissue sections were cut and stained with hematoxylin and eosin stain (H&E).

A statistical analysis between age of presentation and specific endometrial causes was done using the Chi-square test. P<0.05 was chosen as the statistical significance level. With SPSS v 18, all the statistical research was carried out.

## Results

A total of 133 cases were performed. In our study, patients' ages were in the range of 35 to 72 years. The age distribution of endometrial patterns in AUB was as follows: 35–40 age

groups: 108 cases; 46–55 age group: 18 cases and >65 age group: three cases reported (Figure 1).



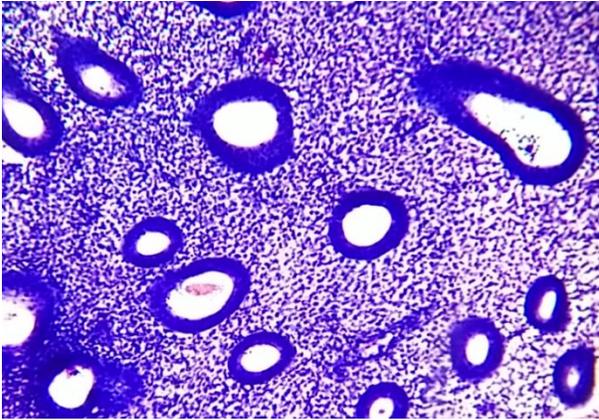
**Figure-1: The age distribution of endometrial patterns in AUB**

Among 133 cases of endometrial biopsies, non-neoplastic cases were 98% and neoplastic cases were 2%. Among the total 133 cases 64 (48%) cases were of proliferative type of endometrium, 37 (28%) were of secretory endometrium, 3(2%) of cases were showing atrophic changes in endometrium, 4(3%) were irregular maturation, 22(17%) were simple hyperplasia, 3(2%) were endometrial carcinoma. All the cases of endometrial carcinoma were in the age group between 45-55 yrs. Table -1 shows histopathological diagnosis of endometrial biopsies.

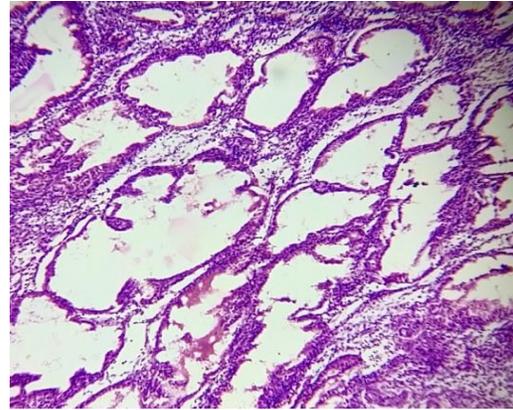
**Table1: Histopathological diagnosis of endometrial biopsies**

Parameters	No. of patients	% of cases
Proliferative endometrium	64	48
Secretory endometrium	37	28
Atrophic endometrium	3	2
Irregular maturation	4	3
Simple hyperplasia	22	17
Endometrial carcinoma	3	2

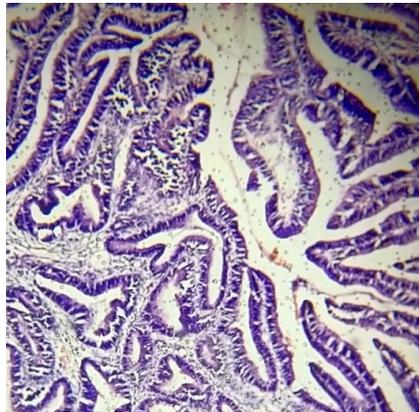
Histopathologic examination showed various patterns in AUB consisting of a normal cyclical pattern showing proliferative, secretory, and shedding phases. A total of 106/133 cases showed disordered proliferative pattern which were most commonly seen between 35 and 45 years of age.



**Figure1: Proliferative phase of endometrium(10x)**



**Figure-2: Simple hyperplasia of endometrium(10x)**



**Figure 3: Endometriod carcinoma(10x)**

### Discussion

The term "abnormal uterine bleeding" has been used to describe any bleeding not fulfilling the criteria of normal menstrual bleeding. The causes of abnormal uterine bleeding include a wide spectrum of diseases of the reproductive system and non-gynecologic causes as well. Organic cause of abnormal uterine bleeding may be subdivided into reproductive tract disease, iatrogenic causes and systemic disease. When an organic cause of AUB cannot be found, then by exclusion, a diagnosis of dysfunctional uterine bleeding (DUB) is assumed<sup>6</sup>. AUB is the most common complaint among reproductive females in India<sup>7</sup>. The screening of endometrial carcinoma in patients with AUB requires complete history, physical examination and laboratory investigations including imaging and endometrial sampling<sup>8</sup>. Earlier studies have demonstrated that without treatment about 10-20% of endometrial hyperplasias may advance to malignancy. It is therefore essential for all women aged over 35 yrs to undergo endometrial screening for early detection and treatment of malignancy<sup>9</sup>. The commonest age group presenting with excessive bleeding in our study was 35-45 yrs (79.6%), similar results were obtained in study by Bhatta S .et al<sup>10</sup>. The most likely etiology of AUB relates to the patients age as to whether the patient is premenopausal,

perimenopausal or postmenopausal<sup>11, 12</sup>. Endometrial changes have been divided into cyclic endometrium (proliferative and secretory) and disordered proliferative endometrium which includes irregular maturation, pill endometrium and decidualisation. In the present study normal cyclic endometrial pattern was found in 75.9% of cases whereas in study by Singh et al<sup>13</sup> it was found to be 58.9%. Atrophy of endometrium occurs as a consequence of prolonged absence of any endogenous or exogenous estrogenic stimulation. The thin endometrium is susceptible to minor injury and may be responsible for post-menopausal bleeding even in the absence of identifiable lesion<sup>14</sup>. In present study atrophic endometrium was seen in 2% of cases. Similar findings were found in study by Sheikh et al.<sup>15</sup>

As the risk of endometrial carcinoma increases with age, the American college of obstetricians and gynecologists recommends endometrial evaluation in women aged 35 years and older who have AUB<sup>16</sup>. Endometrial carcinoma thus is commonly seen in peri and post-menopausal age group. In the present study, there were 3 cases (2.2%) of endometrial carcinoma; all are in perimenopausal and postmenopausal women.

Abnormal uterine bleeding due to abortion formed a significant group in younger women. Hence, in reproductive age group complications of pregnancy should be ruled out in any patient with AUB. Chronic endometritis was observed in few patients. One case showed epithelioid granulomas suggestive of tuberculosis. Patient with chronic endometritis can present with AUB, pelvic pain and infertility. This condition needs to be diagnosed because with specific treatment, endometrium starts functioning normally.

### **Conclusion**

Endometrial lesions are associated with particular ages. AUB is more frequently dysfunctional in perimenopausal women, so when they are in the reproductive age range, they should first rule out pregnancy-related issues. This study's significantly high incidence of aberrant proliferative patterns suggests that these patients present at an early stage.

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