

DOI: <https://dx.doi.org/10.18203/2320-1770.ijrcog20231237>

Original Research Article

## Study of histopathological findings of endometrial biopsy in women with abnormal uterine bleeding

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**Received:** 25 March 2023

**Accepted:** 14 April 2023

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### ABSTRACT

**Background:** Abnormal uterine bleeding is one of the most common problems presenting in OPD to the gynecologist regardless of the age of the women. The main aim was to study the frequency of different histopathological findings of endometrial sample in patients with abnormal uterine bleeding.

**Methods:** This study was conducted on 82 patients from December 2021 to November 2022 in the department of obstetrics and gynecology. Patients with AUB due to gestational cause like missed abortion, incomplete abortion, retained products of conception and with uterine fibroid were excluded from study.

**Results:** Abnormal uterine bleeding (AUB) presented mostly in the 41-50 years of age. The commonest histopathological pattern in abnormal uterine bleeding was normal physiological changes of menstrual cycles secretory phase (29%). Endometrial hyperplasia was the most common endometrial pathology observed in 11% patients.

**Conclusions:** Endometrial evaluation in abnormal uterine bleeding helps in early detection of pre-neoplastic conditions and malignancy to provide early treatment and avoid further complications.

**Keywords:** Abnormal uterine bleeding, Biopsy, Endometrium

### INTRODUCTION

Abnormal uterine bleeding (AUB) is one of the most common health problems for which patient come in gynecology OPD. It is seen in women of all age groups.

Abnormal uterine bleeding (AUB) is defined as a bleeding pattern that differs in frequency, duration and amount from a pattern observed during a normal menstrual cycle.<sup>1</sup> Patient can present with varied presentations like heavy menstrual bleeding (HMB), frequent menses, irregular menses, post-coital bleeding, or post-menopausal bleeding (PMB).

Abnormal uterine bleeding can be caused by a wide variety of disorders such as pregnancy complications, medications, systemic conditions and genital tract pathology. The International Federation of Gynecology and Obstetrics in 2011, devised a new classification for the

causes of AUB. The system, based on the acronym PALM-COEIN (polyps, adenomyosis, leiomyoma, malignancy and hyperplasia-coagulopathy, ovulatory disorders, endometrial causes, iatrogenic, not classified).<sup>2</sup>

Endometrial biopsy is used as a diagnostic aid in AUB. It is done as a first-line test in women >45 years of age presenting with AUB. Endometrial biopsy is also done in patients <45 years of age with a history of unopposed estrogen exposure, failed medical management, and persistent AUB.<sup>3</sup> The main idea is to rule out the precursor lesions like hyperplasia and aggressive endometrial carcinoma.<sup>4</sup>

The present study aimed at studying the histopathological findings of endometrial biopsy in women presenting with AUB and in turn detecting the underlying cause as simple as hormonal imbalance or carcinoma requiring aggressive treatment.

## METHODS

This study was conducted in obstetrics and gynecology department ESIC Medical College and Hospital, Bihta, Patna, Bihar. It was conducted over a period of one year (December 2021 to November 2022). The study population comprised of the women between 31-60 years of age, who came in OPD with complain of AUB (abnormal uterine bleeding). The relevant clinical details like age, presenting complaints, and menstrual details were collected from the case records of patients.

In our institution we preferably advise patients for endometrial biopsy premenstrually and before biopsy we also advise relevant lab investigations, USG pelvis to see any medical and organic pathology and endometrial thickness.

Patients with AUB due to gestational cause like missed abortion, incomplete abortion, retained products of conception and with uterine fibroid were excluded from study. All endometrial biopsies from patients with AUB not due to gestational causes were included in the study. Following the endometrial biopsy which we take by Karman cannula or by curette, specimen were sent for the histopathological examination. All data were recorded in a carefully structured proforma. Analysis was done in the form of percentages and represented as tables.

## RESULTS

Eighty-two samples of endometrium obtained from patients suffering from AUB were included in the present study. Age of the patients ranged from 31-60 years. The age wise distribution of the study population showed that highest incidence of AUB (n=41, 50%) was found in 41-50 years of age group. Followed by 26 (32%) cases in 31-40 years of age group while least number of patients were seen in the 51-60 years of age group (n=15, 18%) (Table 1).

**Table 1: Age distribution of patients with abnormal uterine bleeding.**

Age group (years)	No. of cases	Percentage
31-40	26	32
41-50	41	50
51-60	15	18
<b>Total</b>	<b>82</b>	<b>100</b>

Endometrial sample revealed various patterns on histopathology. Histopathological examination showed secretory endometrium as the predominant finding in 24 (29%) cases followed by proliferative endometrium in 21 (26%) cases. Hyperplasia with atypia and without atypia were seen in 5 (6%) and 9 (11%) cases respectively. Polyp was seen in 2 (3%) cases. Squamous dysplasia was seen in 2 (3%) cases (Table 2).

**Table 2: Results of histopathological examination of endometrium in patients with abnormal uterine bleeding.**

Endometrial findings	Number of cases	Percentage
<b>Proliferative</b>	21	26
<b>Secretory</b>	24	29
<b>Hyperplasia with atypia</b>	5	6
<b>Hyperplasia without atypia</b>	9	11
<b>Polyp</b>	2	3
<b>Decidual reaction</b>	4	5
<b>Atrophic</b>	7	8
<b>Squamous dysplasia</b>	2	3
<b>Hormonal influence</b>	8	8
<b>Total</b>	<b>82</b>	<b>100</b>

Age-specific analyses clearly revealed that menorrhagia is the most common complaint seen in the 33 (40%) cases, followed by irregular menses in 30 (37%) cases.

**Table 3: Age-wise distribution of the bleeding pattern in patients with abnormal uterine bleeding.**

Bleeding pattern	31-40	41-50	51-60	Total (%)
<b>Menorrhagia</b>	10	19	4	33 (40)
<b>Polymenorrhoea</b>	4	2	1	7 (9)
<b>Metrorrhagia</b>	11	16	3	30 (37)
<b>Post menopausal</b>		4	3	7 (8)
<b>Hypomenorrhoea</b>	1		4	5 (6)
<b>Total</b>	<b>26</b>	<b>41</b>	<b>15</b>	<b>82 (100)</b>

## DISCUSSION

Endometrium is a dynamic, hormonally sensitive and responsive tissue, which constantly and periodically undergoes changes in the active reproductive life. It is a sensitive bioassay for estrogen and progesterone, whose actions are mediated on specific receptors.<sup>5</sup> In our study excessive bleeding was commonly noticed in the 41-50 years age. A similar incidence was reported by Singh et al.<sup>4</sup> The same age group was found to be affected in studies by Doraiswami et al and Sharma et al.<sup>6,7</sup>

The commonest endometrial pattern in our study was normal physiological phases of endometrium i.e. secretory endometrium in 29% cases and proliferative endometrium in 26% cases. Study done by Sajitha et al in which secretory phase endometrium was the commonest goes with our finding.<sup>10</sup> Desai K et al observed most common in proliferative than in secretory accounting for 29% and 20% respectively.<sup>8</sup>

Anovulation is the cause for bleeding in the proliferative phase, and bleeding in the secretory phase is due to ovulatory dysfunction endometrial hyperplasia without atypia was the most common pathology encountered in 9

cases (11%). Similar observations (5.79%) found in a study by Jairajpuri et al.<sup>9</sup> Identification of endometrial hyperplasia is important because they are thought to be precursors of endometrial carcinoma.

In this study, 71.25% presented with the complaint of menorrhagia. This was the most common presenting complaint in both reproductive and perimenopausal age groups. The next frequent complaint was metrorrhagia. Menorrhagia is the commonest presentation of AUB found in studies done by Sharma et al, Sajitha et al and Mukhopadhyay et al.<sup>7,10,11</sup> In the present study 2 (3%) cases of endometrial polyps were observed. Jairajpuri et al observed similar findings accounting 1.7% cases.<sup>9</sup> Atrophic endometrium comprised in 7 (8%) cases of AUB, whereas study done by Cornitescu et al and Devi et al incidence of atrophic endometrium in post-menopausal patients varies from 4.34-36.2%.<sup>12,13</sup>

## CONCLUSION

AUB significantly affects the quality life of women. Histopathological examination of endometrial biopsy in patients with abnormal uterine bleeding showed a number of changes ranging from normal endometrium to preneoplastic conditions. Abnormal uterine bleeding can occur due to organic causes in the uterus or due to functional disturbances related to ovulation. The histopathological finding of endometrial biopsy is important in the evaluation of these patients to rule out preneoplastic conditions and malignancy to provide early treatment and avoid further complications.

*Funding: No funding sources*

*Conflict of interest: None declared*

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

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**Cite this article as:** Sanjita, Khanam I. Study of histopathological findings of endometrial biopsy in women with abnormal uterine bleeding. Int J Reprod Contracept Obstet Gynecol 2023;12:1435-7.