

# Study on Histopathological Profile of Endometrial Biopsy in Patients of Abnormal Uterine Bleeding

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## Abstract

**Background:** Abnormal uterine bleeding is one of the common gynaecological complain. Endometrial biopsy is essential tool for proper diagnosis. **Subjects and Methods:** The present observational study was conducted upon 207 specimens to assess the histopathological profile. Background details of patients, the presenting complain and histopathological findings were noted. **Results:** Most of the patients were above 45 years of age. Menorrhagia was the most common complain (53.1%) followed by metrorrhagia (29%) and polymenorrhagia (11.1%). Secretory pattern was seen in 36.2% and proliferative pattern in 31.9%. Chronic endometritis cases showed chronic nonspecific pattern in 5.8% and granulomatous changes in 1.9% cases. **Conclusion:** Endometrial biopsy is useful in diagnosis of etiology of these cases.

**Keywords:** Endometrial Biopsy, Histopathology, Observational study.

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**Received:** January 2019

**Accepted:** January 2019

## Introduction

Abnormal uterine bleeding (AUB) has been termed for the condition of uterine bleeding that varies in duration, frequency and amount of flow from a pattern observed during a normal menstrual cycle or after menopause.<sup>[1]</sup> It is one of the commonest complaints seen in Gynaecology OPD.<sup>[2]</sup> It can result from a variety of conditions, ranging from anovulation, fibroids and polyps to endometrial causes like disordered proliferative endometrium, endometritis, hyperplasia, cyclical endometrium, polyps and malignancy.<sup>[3]</sup> Patients present with menorrhagia, polymenorrhoea, metrorrhagia and intermenstrual bleeding. It is evaluated by detailed clinical examination and laboratory and radiological investigations. In most of the cases, the cause is not clear and the patients need endometrial biopsy.<sup>[4]</sup> This is considered to be the gold standard for diagnosis of the cause of AUB as it is safe and convenient.<sup>[5]</sup>

### Aims & objectives

The present study was conducted to find the histopathological profile of endometrial biopsy samples received in the department of Pathology for assessment of causes of AUB.

## Subjects and Methods

The present study was observational in nature conducted

at the Department of Pathology, Great Eastern Medical School & Hospital, Srikakulam, Andhra Pradesh. A total of 207 endometrial specimens of patients suffering from abnormal uterine bleeding and received in the department were included in the present study. Patients with fibroid uterus, isolated cervical or vaginal pathology and hemostatic disorders were excluded from the study. If the sample was inadequate, it was also excluded from the study. Background profile and clinical history of the patients were noted from the case history sheets including age and pattern of menstrual abnormality. Biopsies were received in the department in 10% formalin. Multiple sections of 5  $\mu$  thickness were taken from formalin fixed paraffin embedded tissue blocks. It was stained with haematoxylin and eosin (H&E) stain. Endometrial biopsies were examined microscopically and histopathological findings were recorded.

Data was recorded in pretested proforma. It was entered in Microsoft Excel and analyzed using SPSS v 16.0. Variables were presented as frequency & percentage of Mean & SD as appropriate. Tests of significance were done and p-value of less than 0.05 was considered to be statistically significant.

## Results

A total of 207 endometrial specimens were studied. [Table 1] show the age of the patients. It was seen that most of the patients were above 45 years of age.

**Table 1: Age of the study subjects**

Age group	Frequency (n=207)	%	95% CI
18-45	79	38.2	31.4-45 %
>45	128	61.8	55.2-68.4 %
Total	207	100	-

[Table 2] shows that menorrhagia was the most common complain (53.1%) followed by metrorrhagia (29%), polymenorrhagia (11.1%), polymenorrhoea (2.9%) and oligomenorrhoea (1%).

**Table 2: Presenting complaints.**

Presenting complain	Frequency (n=207)	%	95% CI
Menorrhagia	110	53.1	46.3-59.9 %
Metrorrhagia	60	29	22.8-35.2 %
Polymenorrhagia	23	11.1	6.8-15.4 %
Polymenorrhoea	6	2.9	0.6-5.2 %
Oligomenorrhoea	2	1	-0.4-2.4 %

[Table 3] shows the findings of histopathological examination. 36.2% specimen showed secretory pattern and 31.9%, proliferative pattern. Chronic endometritis cases showed chronic nonspecific pattern in 5.8% and granulomatous changes in 1.9% cases. Polypoidal changes were seen in 6.8% specimen and irregular endometrium in 4.8% specimen. Malignant changes were observed in 1% specimen.

**Table 3: Histopathological findings.**

Histopathology	Frequency (n=207)	%	95% CI
Secretory pattern	75	36.2	29.7-42.7 %
Proliferative pattern	66	31.9	25.6-38.2 %
Chronic nonspecific	12	5.8	2.6-9 %
Granulomatous	4	1.9	0-3.8 %
Polyp	14	6.8	3.4-10.2 %
Irregular endometrium	10	4.8	1.9-7.7 %
Endometrial hyperplasia	19	9.2	5.3-13.1 %
Malignancy	2	1	0-2.4 %
Others	4	1.9	0-3.8 %

## Discussion

A total of 207 endometrial biopsy specimen were examined. Most of the patients were above 45 years of age (61.8%). Padhye et al found in Navi Mumbai that the patients' age was ranged from 18 to 75 years and most of the curettages were seen in the age group of 46-50 years.<sup>[6]</sup> Varshney et al observed in Pune that the maximum number of patients (54%) were in the age group of 20- 40 years.<sup>[7]</sup> Gupta et al found in Delhi that the age of the patients varied, ranging from 18 years to 70 years. Maximum number of patients presented in the age group 40-49 years (49.2%), followed by 30-39 years (34.9%).<sup>[8]</sup>

In the present study, most of the females were multiparous. Varshney et al also observed that maximum number of cases in multiparous group. Only 2.75% of cases were nulliparous and 5.75% were para 1.<sup>[7]</sup>

Menorrhagia was the most common complain (53.1%) followed by metrorrhagia (29%), polymenorrhagia (11.1%)

as found in the present study. Gupta et al found that the patients presented most commonly as menorrhagia (48.6%), followed by metrorrhagia (29.7%), polymenorrhagia (7.5%) and post menopausal bleeding (5.8%).<sup>[8]</sup> Saraswathi et al found that the most common age group presenting with AUB was 41–50 years (33.5%).<sup>[9]</sup>

The present study showed that 36.2% specimen had secretory pattern and 31.9%, proliferative pattern. Chronic endometritis cases showed chronic nonspecific pattern in 5.8% and granulomatous changes in 1.9% cases. Malignant changes were observed in 1% specimen. Padhye et al found that the commonest pathology observed was endometrial hyperplasia in 30.09% patients, followed by proliferative endometrium seen in 21.64% and secretory endometrium in 12.43%. Endometrial carcinoma was seen in 2.98% cases.<sup>[6]</sup> Varshney et al observed that the histo-pathological findings suggested a benign aetiology in 68% cases. However, endometrial hyperplasia without atypia was seen in 26% women and endometrial hyperplasia with atypia in 5.5% cases. Significantly, 02 women were diagnosed as carcinoma endometrium which is very important.<sup>[7]</sup>

Gupta et al conducted a study in Delhi.<sup>[8]</sup> In their study, endometrial biopsy revealed normal cyclical pattern of endometrium in 65.6% of cases including secretory endometrium (33.4%), proliferative endometrium (31.3%) and shed endometrium (1.0%). Pregnancy related abnormal bleeding accounted for 9.8% of cases. Endometrial hyperplasia constituted 7.1% including simple hyperplasia (5.4%), atypical simple hyperplasia (1.2%) and complex atypical hyperplasia (0.6%). Chronic endometritis was seen in 4.0%, and endometrial polyp (3.0%). Irregular endometrium was seen in 4.2% cases. Atrophic endometrium was seen in 0.6% cases. Malignancy was discovered as the cause of abnormal bleeding in 1.7% including adenocarcinoma in 1.0%, squamous cell carcinoma (0.6%), and poorly differentiated carcinoma in 0.2%. Exogenous hormone effect was noted in 3.7%.

Saraswathi et al found that the commonest pattern in these patients was normal cycling endometrium (28.4%). The commonest pathology irrespective of the age group was disordered proliferative pattern (20.5%). Other causes identified were complications of pregnancy (22.7%), benign endometrial polyp (11.2%), endometrial hyperplasias (6.1%), carcinomas (4.4%) and chronic endometritis (4.2%). Endometrial causes of AUB and age pattern was statistically significant with p-value<0.05.<sup>[9]</sup>

## Conclusion

It is concluded from the present study that different endometrial pathology can lead to abnormal menstrual bleeding. Cyclic endometrium was the common pattern in reproductive age. In perimenopausal and postmenopausal age groups, hyperplasia is important. Endometrial biopsy can be helpful in diagnosis and management of these cases.

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**How to cite this article:** Vaibhaw H, Girikumar E, Mandke DH, Sinha RNP. Study on Histopathological Profile of Endometrial Biopsy in Patients of Abnormal Uterine Bleeding. Asian J. Med. Res. 2019;8(1):PT11-PT13.  
DOI: [dx.doi.org/10.21276/ajmr.2019.8.1.PT4](https://doi.org/10.21276/ajmr.2019.8.1.PT4)

**Source of Support:** Nil, **Conflict of Interest:** None declared.

