



## A STUDY TO EVALUATE HISTOPATHOLOGICAL VARIATIONS IN ENDOMETRIAL BIOPSIES IN A TERTIARY CARE HOSPITAL

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### ABSTRACT

**OBJECTIVE:** 1. To evaluate endometrial variation in women with abnormal uterine bleeding.  
2. To study spectrum of patterns of endometrium in different age group.

**MATERIALS AND METHODS:** A retrospective study was undertaken to review the histopathological reports of all endometrial biopsies over a period of 3 months i.e March 2019 to May 2019 in Department of Pathology, Government Medical College, Omandurar Government Estate. Data was entered in Microsoft Excel. Analysis was done in the form of percentage and represented as tables where necessary.

**RESULT:** A total of 100 patients were evaluated during the study period. Maximum number of cases were observed in age group of 35-45 years with secretory phase of endometrium (43%) being the most common functional lesion. Other endometrial patterns as in pie chart, were proliferative phase (31%), complex atypical hyperplasia of endometrium (2%), simple atypical hyperplasia of endometrium (4%), complex hyperplasia of endometrium without atypia (8%), simple hyperplasia of endometrium without atypia (12%)

The incidence of various endometrial patterns in different age groups is as follows 15-25 years- 9%, 25-35 years- 23%, 35-45 years- 50%, 45-55 years-18%.

**CONCLUSION:** In my study the most frequent endometrial pattern noted was secretory endometrium. The endometrial sampling using pipelle is preferred because it is safe, accurate and a cost effective outpatient procedure which avoids general anaesthesia and has a high sensitivity and specificity<sup>10</sup>. Using endometrial biopsy, abnormal cells can be detected so that the patient can be treated accordingly at an early stage.

**KEYWORDS :** endometrium, biopsy, abnormal uterine bleeding

### INTRODUCTION:

Endometrium shows histological variations according to age of women, phase of her menstrual cycle and any other specific pathology like abnormal uterine bleeding which is one the commonest condition in perimenopausal and postmenopausal women seeking gynaecological advise<sup>1</sup>. Abnormal uterine bleeding is the most common symptom of gynaecological condition which is defined as any type of bleeding in which the duration, amount, frequency, or amount is excessive for an individual patient<sup>2</sup>. AUB is regarded as a sign of possible uterine disease, including acute and chronic AUB<sup>3</sup>. It is the most common symptom and main complaint among women of child bearing age in the gynaecological clinic, accounting for 30% of world's gynaecological outpatient clinics<sup>3</sup>. Women with abnormal bleeding have a lower quality of life than the general female population. AUB leads to loss of productivity and may result in surgical interventions. AUB is reported to occur in 9 to 14% women between menarche and menopause<sup>4</sup>.

Endometrial sampling is effectively used as the first diagnostic step in abnormal uterine bleeding as it is simple, cost effective and appropriate method that provides accurate diagnostic yield<sup>5</sup>. Aim of our study is to evaluate variations in endometrium in women with abnormal uterine bleeding and also to study different patterns of endometrium in different age groups.

### AIMS AND OBJECTIVES:

1. To evaluate endometrial variation in women with abnormal uterine bleeding.
2. To study spectrum of patterns of endometrium in different age group

### MATERIALS AND METHODS:

A retrospective study was undertaken to review the histopathological reports of all endometrial biopsies over a period of 3 months i.e March 2019 to May 2019 in Department of Pathology, Government Medical College, Omandurar Government Estate. Data was entered in Microsoft Excel. Analysis was done in the form of percentage and represented as tables where necessary.

### INCLUSION CRITERIA

Age of patients ranged from 15-55 years.

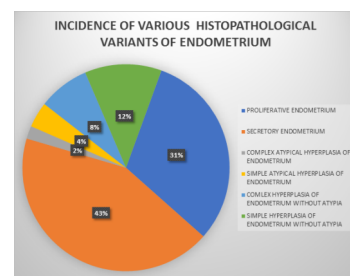
### EXCLUSION CRITERIA:

1. Vaginal bleeding caused by pregnancy and pregnancy related

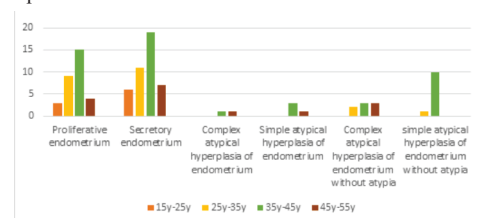
factors.

2. Vaginal bleeding caused by vaginitis.
3. Vaginal bleeding after menopause.
4. Use of drugs such as sex hormones for nearly 6 months.
5. Patients who presented with abnormality in the ovary.

### RESULTS:



Incidence of histopathological variants of endometrium in different age groups



**TABLE 1:**

Incidence of histopathological variants of endometrium in different age group

TYPE	15y-25y	25y-35y	35y-45y	45y-55y	TOTAL
PROLIFERATIVE ENDOMETRIUM	3	9	15	4	31
SECRETORY ENDOMETRIUM	6	11	19	7	43
COMPLEX ATYPICAL HYPERPLASIA OF ENDOMETRIUM	-	-	1	1	2

SIMPLE ATYPICAL HYPERPLASIA OF ENDOMETRIUM	-	-	3	1	4
COMPLEX HYPERPLASIA OF ENDOMETRIUM WITHOUT ATYPIA	-	2	3	3	8
SIMPLE HYPERPLASIA OF ENDOMETRIUM WITHOUT ATYPIA	-	1	9	2	12

**RESULT:**

A total of 100 patients were evaluated during the study period. Maximum number of cases were observed in age group of 35-45 years with secretory phase of endometrium (43%) being the most common functional lesion. Other endometrial patterns as in pie chart, were proliferative phase (31%), complex atypical hyperplasia of endometrium (2%), simple atypical hyperplasia of endometrium (4%), complex hyperplasia of endometrium without atypia (8%), simple hyperplasia of endometrium without atypia (12%)

The incidence of various endometrial patterns in different age groups is as follows 15-25 years- 9%, 25-35 years- 23%, 35-45 years- 50%, 45-55 years-18% as seen in bar diagram and table 1.

**DISCUSSION:**

In my study the various endometrial pattern observed were proliferative phase endometrium(31%), secretory phase endometrium (43%), complex atypical hyperplasia of endometrium (2%), simple atypical hyperplasia of endometrium(4%), complex hyperplasia of endometrium without atypia (8%), simple hyperplasia of endometrium without atypia(12%).

In proliferative phase, the glands are tubular and compact [fig 1]

In secretory phase, the glands are dilated, tortuous, producing a serrated appearance. The stroma is edematous [fig 2]

In atypical hyperplasia (simple and complex) there is increase in the size and number of glands which are irregularly shaped. Glands are tortuous with epithelial tufts. Cells are stratified. Nuclear enlargement and mitosis occur [fig 3]

In complex endometrial hyperplasia without atypia there is an increase in the number and size of endometrial glands. Marked gland crowding and branching of glands [fig 4]

In simple endometrial hyperplasia without atypia there is increase in the size of various glands which are irregular in shape with cystic dilatation [fig 5]

PROLIFERATIVE ENDOMETRIUM

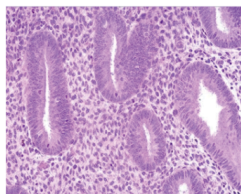


Fig 1

SECRETORY ENDOMETRIUM

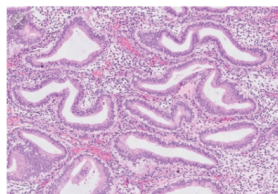


fig 2

**ATYPICAL ENDOMETRIAL HYPERPLASIA (SIMPLE AND COMPLEX)**

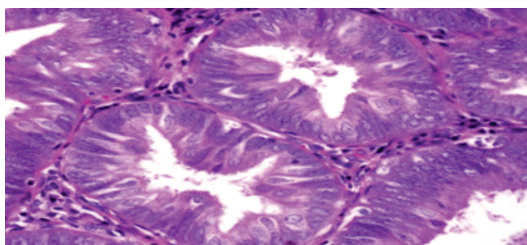


Fig 3

**COMPLEX HYPERPLASIA WITHOUT ATYPIA**

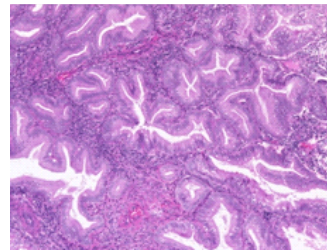


Fig 4

**SIMPLE HYPERPLASIA WITHOUT ATYPIA**

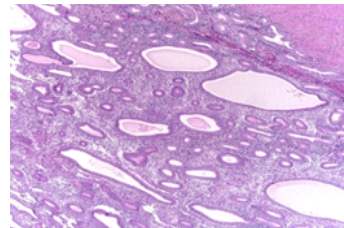


fig 5

**CONCLUSION:**

Histopathological examination of endometrial biopsy is an important tool to diagnose gynaecological conditions, show wide spectrum of changes ranging from normal endometrium to malignancy. In my study the most frequent endometrial pattern noted was secretory endometrium. The endometrial sampling using pipelle is preferred because it is safe, accurate and a cost effective outpatient procedure which avoids general anaesthesia and has a high sensitivity and specificity<sup>10</sup>. Using endometrial biopsy, abnormal cells can be detected so that the patient can be treated accordingly at an early stage.

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