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# Abnormal Uterine Bleeding: A One Year Retrospective Histopathological Study

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**Abstract:** ***Introduction: Evaluation of hystopathological pattern of endometrium is essential for appropriate management of patients with abnormal uterine bleeding. Objective: To guide the gynecologist to modify their treatment strategy depending on hystopathological pattern. Materials and Methods: A total of 386 cases of endometrial biopsies were included in the study during a period of one year (2014-2015). Conclusion: Proliferative endometrium was predominantly more common followed by secretory endometrium and endometrial hyperplasia in our study. Atrophic endometrium and endomentrial carcinoma were significantly associated with increasing age.***

**Keywords:** Abnormal uterine bleeding, endometrium, hystopathological pattern

## 1. Introduction

Female genital tract is the hormone responsive system and changes throughout life by changing levels of ovarian hormones (1, 2).

Endometrium is a dynamic issue which undergoes cyclic changes including proliferative phase, ovulation, secretary phase, predecidual changes, breakdown of stroma and ultimately casting off of superficial layer of endometrium during menstruation (3, 4).

Endometrial biopsy or curettage could be a safe and effective diagnostic step in evaluation of abnormal uterine bleeding after ruling out medical causes (5).

The causes of abnormal uterine bleeding are hormonal imbalances (i.e. dysfunctional uterine bleeding), endometrial polyps, chronic endometritis, endometrial hyperplasias and endometrial carcinomas (6, 7).

### Aims & Objectives

1) To evaluate the histological patterns of endometrial is patients with abnormal uterine bleeding.
2) To design various screening programmes.
3) This data will guide gynecologist to modify their treatment strategies.

## 2. Materials and Methods

This is a one year retrospective study done at Rangaraya Medical College, Kakinada from May 2014 to May 2015. All the endometrial biopsies received in the department of pathology during one year period were included in the study. The specimens were fixed in 10% formalin, processed sections cut and strained with Hematoxylin and Eosin.

## 3. Results

Our study included a total of 386 cases having abnormal uterine bleeding.

**Table 1:** Distribution of endometrial lesions among study cases

| *Endometrial Lesions* | *No. of Patients* | *Percentage* |
|---|---|---|
| Proliferative Phase | 174 | 45.07% |
| Secretory Phase | 117 | 30.31% |
| Disordered Proliferative | 29 | 7.51% |
| Chronic Endometritis | 4 | 1.03% |
| Atrophic Endometrium | 17 | 4.40% |
| Endometrial Polyp | 12 | 3.10% |
| Non-atypical endometrial hyperplasia | 18 | 4.66% |
| Atypical Endometrial Hyperplasia | 6 | 1.55% |
| Endometrial Carcinoma | 4 | 1.03% |
| Hormone Induced changes | 5 | 1.29% |

In our study dysfunctional uterine bleeding including proliferative phase, secretory phase and disordered proliferative phase constituted 320 cases (82.89%). Organic causes of dysfunctional uterine bleeding 66 cases (17.11%)

In our study among organic causes of dysfunctional uterine bleeding endometrial hyperplasia constituted 24 cases (6.21%), followed by atrophic endometrium 17 cases (4.4%), endometrial polyp 12 cases (3.1%), Chronic endometritis and endometrial carcinoma each 4 cases (1.03%).

In our study among endometrial hyperplasias 18 cases (4.66%) were Non-Atypical endometrial hyperplasias and 6 cases (1.55%) were Atypical endometrial hyperplasias.

Table 2 shows the distribution of histological pattern of endometrium in patients with dysfunctional uterine bleeding according to their age groups.

In our study largest number of cases are seen in proliferative

phase and in the age group of 31-40 years (18.39%). Most of the cases with secretory phase were seen in 41-50 years (13.98%) followed by 31-40 years (13.73%).

Atrophic endometrium was more common in postmenopausal women >50 years, constituting 15 cases (3.88%). Endometrial hyperplasia was common in the perimenopausal 41-50 and premonopausal women 31-40 years constituting 10 cases each (2.59%), while all the cases with endometrial carcinoma was found in postmenopausal women in the age groups 51-60 years (0.5%) and > 60 years of age (0.5%).

**Table 2:** Histopathological pattern of endometrium in patients with Abnormal Uterine Bleeding according to age

| Endometrial Pattern | <20 | 21-30 | 31-40 | 41-50 | 51-60 | >60 | Total |
|---|---|---|---|---|---|---|---|
| Proliferative Phase | - | 29 | 71 | 69 | 4 | 1 | 174 |
| Secretory Phase | 1 | 8 | 53 | 54 | 1 | - | 117 |
| Disordered Proliferative | - | 3 | 12 | 7 | 7 | - | 29 |
| Chronic Endometritis | - | 1 | 3 | - | - | - | 4 |
| Atrophic Endometrium | - | - | 1 | 1 | 7 | 8 | 17 |
| Endometrial Polyp | - | 3 | 5 | 4 | - | - | 12 |
| Non-atypical endometrial hyperplasia | - | - | 10 | 6 | 1 | 1 | 18 |
| Atypical Endometrial Hyperplasia | - | 1 | - | 4 | 1 | - | 6 |
| Endometrial Carcinoma | - | - | - | - | 2 | 2 | 4 |
| Hormone Induced changes | - | 3 | 2 | - | - | - | 5 |

## 4. Discussion

Our study included a total of 386 cases having abnormal uterine bleeding. In our study minimum age of the patients was 30 years and maximum age was 76 years. Our study results have indicated that majority of our patients were aged 37-60 years. A study conducted by Abid et al (8) in Karachi also showed similar results. Vaidya et al (4) from Nepal also reported t hat majority of patients with abnormal uterine bleeding were from reproductive and perimenopausal age groups which is in correlation with our study results.

Our study results showed proliferative endometrium (45.07%) was the most common histopathological diagnosis which can be compared with the studies done by Salvi et al (9), Ghani et al (10) and Bolde et al (11).

In our study endometrial hyperplasia were seen in perimenopausal age group, which can be comparable with the study done by Damle et al (12). The endometrial carcinoma was the rarest endometrial pathology seen in endometrial curettings of abnormal uterine bleeding cases, showing similar results with the studies done by Abid et al (8) and Vaidya et al (4).

## 5. Conclusion

Proliferative endometrium was predominantly more common followed by secretory endometrium and endometrial hyperplasias in our study. Endometrial polyps are seen more commonly in reproductive age group. Atrophic endometrium and endometrial carcinoma are commonly associated with postmenopausal age group. For the correct evaluation of cases presenting with abnormal uterine bleeding, histopathological evaluation of endometrial sampling is the gold standard method. With recent diagnostic modalities endometrial biopsies still play an essential role in diagnosis of precursor and malignant lesions of endometrium.

## 6. Figures

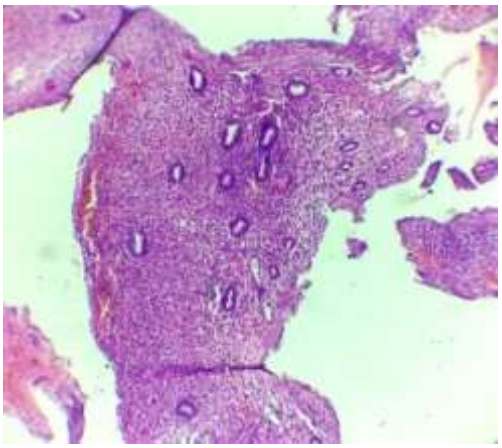

**Figure 1:** Proliferative phase of endometrium

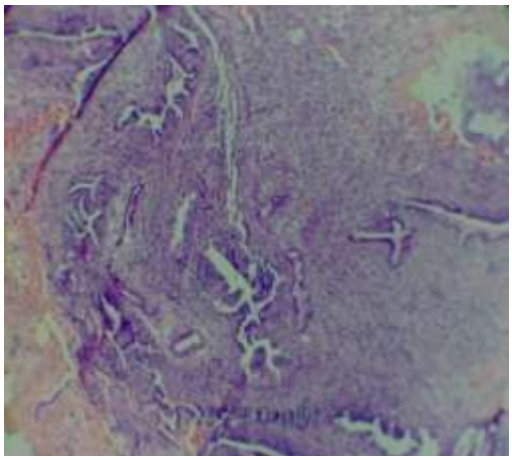

**Figure 2:** Secretory phase of endometrium

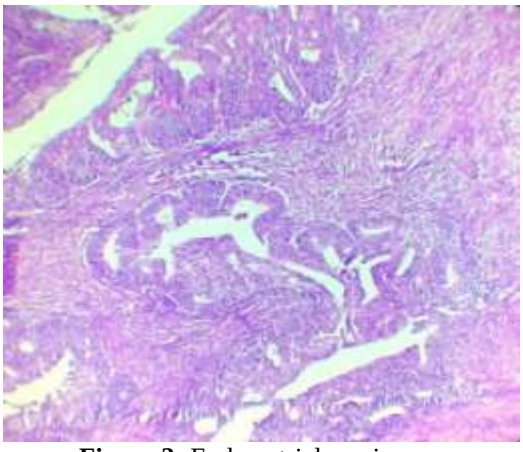

**Figure 3:** Endometrial carcinoma

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