Study of Endometrial Sample Histopathology in Cases of Abnormal Uterine Bleeding

Authors
Dr Vinita Kumari¹, Dr Pranab Kumar Verma²*, Dr Reena Sinha³
¹Assistant Professor, Deptt. of Obstetrics And Gynaecology, Nalanda Medical College and Hospital, Patna
²Consultant Pathologist, Mahavir Cancer Sansthan, Patna
³Assistant Professor, Deptt of Pathology, Nalanda Medical College and Hospital, Patna
*Corresponding Authors
Dr Pranab Kumar Verma
Email: pranabverma@yahoo.co.in

Introduction
Abnormal uterine bleeding (AUB) is a common complaint with which women come to Gynaecology clinics. At least 10 to 15 % women experience some form of abnormal uterine bleeding especially in adolescence, perimenopause and following child birth. Majority are not of much concern especially those which are due to immaturity of hypothalamo-pituitary-ovarian axis and many resolve by simple empiric pharmacological therapy. The rest are disturbing, especially in elderly women and need evaluation and ruling out endometrial premalignant and malignant lesions.

Endometrial sampling can be done under hysteroscopic visualisation, pipellebiopsy, dilatation and curettage and aspiration by karman canula and manual vaccum aspirator (MVA)

Endometrial Sampling in young women (<35 years) not responding to empirical pharmacotherapy, and in perimenopausal and postmenopausal women, often helps in establishing the specific endometrial pathology and ruling out malignant and premalignant lesions.

Aims and Objectives
The aim of the study was
1. Assessment of endometrial pathology in women complaining of abnormal uterine bleeding and
2. To rule out premalignant and malignant lesions

Material and Methods
The study was prospective Study done in Department of Obstetrics and Gynaecology, Nalanda Medical College and Hospital from January 2016 to December 2017.
During this period patients coming with complain of abnormal uterine bleeding were evaluated by proper history, physical examination and pelvic examination.

Inclusion Criteria
Women included in the study were those <35 years 1.Not responding to empirical
pharmacotherapy in the absence of any structural abnormality
2. At high risk case for endometrial hyperplasia like PCOD 3.Family history of endometrial cancer.
Women>35 years were chosen when they were without any structural abnormality on pelvic examination and had AUB.
Women with Post menopausal bleeding with endometrial thickness >5mm on transvaginal sonography.
Sampling was done by 4 mm karman canula and Manual Vacuum Aspiration (MVA) syringe.
For ripening of cervix after excluding contraindications of misoprostol tablets 200 microgm of misoprostol tab per vaginally or 400 microgram tab orally, as per patients choice,12 hrs prior to procedure was given. Anaesthesia used was local paracervical block using 0.5% lidocaine without adrenalin.
The sample obtained were sent to the department of pathology in 10% formalin solution for histopathological reporting. In case of doubt opinion of second histopathologist was taken.

**Observation and Result**
114 samples were obtained out of which reporting was done on 100 samples.
14 samples were inadequate and hence study was done on 100 samples.

| Table - Showing endometrial pathology on age basis |
|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| Age            | No of Cases   | Secret. Endom. | Prolif. Endom. | Atrophic Endom. | Non Specific Endometritis | Tubecular Endometritis | Polyp |
|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| <35            | 10             | 5              | 2              | 0              | O              | 1              | 1              |
| 35-40          | 20             | 18             | 9              | 0              | 1              | 0              | 2              |
| 40-45          | 37             | 10             | 6              | 0              | 1              | 0              | 0              |
| >45            | 33             | 6              | 7              | 5              | 0              | 0              | 2              |
| Total          | 100            | 39             | 24             | 5              | 2              | 0              | 6              |

| Age            | RPOC | Simple HyperplasiaWithout Atypia | Simple Hyperplasia With Atypia | Complex Hyperplasia Without Atypia | Complex Hyperplasia With Atypia | Adenocarcinoma |
|----------------|------|----------------------------------|-------------------------------|------------------------------------|----------------------------------|----------------|
| <35            | 3    | 1                                | 0                             | 0                                  | 0                                 | 0              |
| 35-40          | 2    | 1                                | 0                             | 0                                  | 0                                 | 0              |
| 40-45          | 0    | 2                                | 1                             | 0                                  | 0                                 | 0              |
| >45            | 0    | 5                                | 2                             | 2                                  | 2                                 | 1              |
| Total          | 5    | 9                                | 3                             | 3                                  | 2                                 | 1              |

In this study 68% cases were histologically normal, reported as secretory endometrium (39%), proliferative endometrium (24%) and atrophic endometrium (5%) ,17% were hyperplastic, simple hyperplasia without atypia (9%) and with atypia(3%) where as complex hyperplasia without atypia(3%) and with atypia (1%). Adenocarcinoma was 1%
The rest were polyp(6%) and endometritis(3%), both nonspecific(2%) and tubercular(1%). Retained products of conception were also found in 5% of cases.

**Discussion**
Abnormal uterine bleeding is a debilitating condition leading to physical, mental and financial effects. According to National health portal AUB is reported in 9 to 14% women and in India the prevalence is 17.9%. The role of endometrium is poorly understood and is multifactorial and complex interplay of various local and systemic factors like prostaglandins, plasminogens and sex hormones.
In this study we tried to study the endometrium and observed that in 63% of cases the endometrium was normal. In another 5% it was atrophic which is again a normal finding in menopausal women. In other studies normal
endometrium varied from 52 to 72%. In study by Jetley et al. endometrium in 63% of the patients with AUB were normal. In 5% cases, there was some form of retained products of conception. This was found in women with history of termination of pregnancy a few months back. In 2% case there was nonspecific endometritis and 1 case was of tubercular endometritis Polyp was found in 6% cases. Hyperplastic endometrium was seen in 17%, with simple hyperplasia without atypia 9% and with atypia 3%, complex hyperplasia without atypia 3% and with atypia 2%. Incidence of Endometrial cancer in various regions of India varies from 4.5 to 2% in this study. Adenocarcinoma was seen in only one case (1%).

**Conclusion**

According to National health portal AUB is reported in 9 to 14% women and in India the prevalence is 17.9%. This study was an effort to study the endometrium in cases of Abnormal uterine bleeding. In most of the cases of AUB especially in young women there is no endometrial pathology which can be shown histopathologically though some poorly understood multifactorial reasons may be held responsible. Hyperplasia and premalignant changes were seen in peri and postmenopausal women more commonly and in these women endometrial sampling to rule out malignant and premalignant lesions should not be missed.

**Conflict of Interest** - None

**References**

1. Shaws textbook of Gynaecology - 16th edition
2. Khare A, Bansal S, Sharma P, Elhence N, Makkar N, Tyagi Y. Morphological spectrum of Endometrium in patients presenting with Dysfunctional Uterine Bleeding. People’s J Sci Res. 2012;5:13–6.
3. Heavy Menstrual bleeding assessment and management – nice guidelines 2018
4. Burke TW, Tortolero-Luna G, Malpica A, et al. Enometrial hyperplasia and endometrial cancer. Obstet Gynecol Clin North Am. 1996;23:411–56. [PubMed]
5. Jetley S, Rana S, Jairajpuri ZS. Morphological spectrum of endometrial pathology in middle-aged women with atypical uterine bleeding: A study of 219 cases. J Midlife Health. 2013;4:216–20. https://doi.org/10.4103/0976-7800.122242. [PMC free article] [PubMed]
6. Munro MG, Critchley HO, Broder MS, Fraser IS, FIGO Working Group on Menstrual Disorders FIGO classification system (PALM-COEIN) for causes of abnormal uterine bleeding in nongravid women of reproductive age. Int J Gynaecol Obstet. 2011;113:313. https://doi.org/10.1016/j.ijgo.2010.11.011. [PubMed].