

## To Study the Correlation between Clinical Evaluation and Histopathological Findings in Abnormal Uterine Bleeding

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### Original Research Article

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**Abstract:**The study included total of 300 hysterectomy specimens with the clinical diagnosis of Abnormal Uterine Bleeding during the period, June 2017 to Aug 2018 in the Department of Surgical Pathology of Amaltas Institute of Medical Sciences, Dewas. The following details were studied: All information related to patient was noted i.e. Name, Age, Registration number, complaints, investigations, Size, shape and weight of the uterus, Surface of the uterus, Thickness of the endometrium and myometrium, Length of fallopian tube and cervix, Measurements of ovary. Most common pattern of bleeding noted in adenomyosis was inter-menstrual bleeding followed by heavy menstrual bleeding. In leiomyoma, heavy menstrual bleeding was the most common type of bleeding observed followed by frequent menstrual bleeding. In chronic cervicitis, inter menstrual bleeding was the common type of bleeding followed by frequent menstrual bleeding. In endometrial adenocarcinoma, post-menopausal bleeding was the commonest type of bleeding noted. Abnormal uterine bleeding is the commonest of all gynecological pathology in women of all ages caused by a wide variety of disorders. The preoperative diagnosis correlates well with the final histopathological diagnosis. However, there are considerable numbers of incidental findings, which are diagnosed only on histopathological evaluation.

**Keywords:** Histopathology, Clinical Evaluation, (AUB) & Eosin.

**Study designed:** Cross Sectional Observational.

### INTRODUCTION

Abnormal uterine bleeding (AUB) is defined as any change in the frequency of menstruation, duration of flow or amount of blood loss [1]. AUB is a common problem encountered by women of all age groups, responsible for around 20-30% visits to outpatient department in reproductive age group and 69% in peri or postmenopausal age group [2].

#### Causes of abnormal uterine bleeding can be categorized as follows

A. Organic: Genital tract infections tumors (benign or malignant), adenomyosis, pregnancy and its complications, systemic disorders and iatrogenic accounting for 20% of cases

B. Dysfunctional uterine bleeding (DUB) caused by anovulation or oligovulation is responsible for 80% of menorrhagia [3].

### MATERIALS & METHODS

#### Place of study

The present study was conducted after approval from institutional ethical committee in the Department of Pathology, Amaltas Institute of Medical Sciences, Dewas, M.P.

#### Study design and duration

The study design was cross sectional observational and included Prospective study from June 2017 to Aug 2018.

### CASE SELECTION

The following details were studied:

- All information related to patient was noted i.e. Name, Age, Registration number, complaints, investigations.
- Size, shape and weight of the uterus.
- Surface of the uterus.
- Thickness of the endometrium and myometrium.
- Length of fallopian tube and cervix.
- Measurements of ovary.

In prospective study, specimens received were fixed in 10% formal saline for 24 hours and processed in the tissue processing machine (Histokinette) in following manner:

- 10% formalin 1 hour
- 70% alcohol 1 hour
- 80% alcohol 1 hour
- 90% alcohol 1 hour
- 95% alcohol 1 hour
- Absolute alcohol 1 hour
- Absolute alcohol 1 hour
- Absolute alcohol 1 hour
- Xylene 1- 1 hour
- Xylene 2- 1 hour
- Paraffin wax 1- 2 hours
- Paraffin wax 2- 2 hours

Paraffin embedded tissue were then blocked in paraffin wax with the help of Plastic moulds. Sections of 3-4 microns were cut on a rotary microtome. Short Ribbons of the sections were floated out in a water bath. Then they were picked up on micro-slides already coated with albumin-glycerine adhesive and kept on hot plate at 60°C temperature for 45 minutes.

- Staining: Paraffin sections were stained by hematoxyline and eosin method as follows:
- Deparaffinization: Sections were deparaffinized by immersing the sections in two changes of xylene for 5 minutes each.

- Hydration: Deparaffinized sections were dipped for two minutes each in 95% and 75% alcohol in turn and then transferred to distilled water.
- Hematoxyline: The Sections were transferred to “Harris Hematoxyline” for five minutes.
- Decolorisation: The sections were quickly dipped in 0.5% hydrochloric acid.
- Bluing of sections: Done by transferring the sections in running water, dipping it in dilute Ammonia water and again washing them in running tap water for ten minutes.
- Counter stain with eosin: Sections were then counter-stained in 2% aqueous eosin solution.
- Dehydration: Sections were dehydrated by passing them in ascending concentrations of alcohol viz. 70, 80, 95% and absolute alcohol, for 2 minutes each.
- Clearing: Dehydrated sections were transferred to an alcohol-xylene mixture for 2 minutes and were passed through two changes of xylene.
- Sections were mounted in DPX and examined after drying.

Slides were studied under microscope along with clinical data. The histopathological diagnosis was made according to new classification system of AUB [4-6] and results thus obtained were analyzed using descriptive statistics.

**RESULTS**

**Table-01: Distribution of histopathology finding according to bleeding pattern in AUB cases**

Histopathology Finding	Bleeding pattern					Total
	HMB	HPMB	IMB	FMB	PMB	
Adenomyos is	21	12	26	14	8	89
Adenomyosis, Atrophic Uterus	2	0	0	0	1	1
Adenomyosis, Bicornuate Uterus	2	1	0	0	0	1
Adenomyosis, Endocervical Polyp	2	1	1	0	0	2
Adenomyosis, Endometrial Polyp	2	0	1	3	0	4
Adenomyosis, Leiomyoma	8	6	4	6	6	31
Adenomyosis, Neurofibroma	1	1	0	0	0	1
Atrophic Uterus	1	0	0	0	5	7
Chronic cervicitis	14	11	24	15	3	75
Endocervical Polyp	0	0	0	0	1	1
Endometrial Polyp	1	1	0	1	1	4
Leiomyoma	19	14	15	18	5	74
Leiomyoma, Atrophic Uterus	0	0	0	0	1	1
Leiomyoma, Endocervical Polyp	7	1	0	0	0	2
Leiomyoma, Endometrial Polyp	8	0	1	0	1	4
Leiomyosarcoma	0	1	0	0	0	1
Endometrial Adenocarcinoma	0	0	0	0	2	2
<b>Total</b>	<b>88</b>	<b>49</b>	<b>72</b>	<b>57</b>	<b>34</b>	<b>300</b>

- Most common pattern of bleeding noted in adenomyosis was inter-menstrual bleeding followed by heavy menstrual bleeding.
- In leiomyoma, heavy menstrual bleeding was the most common type of bleeding observed followed by frequent menstrual bleeding.

- In chronic cervicitis, inter menstrual bleeding was the common type of bleeding followed by frequent menstrual bleeding.

- In endometrial adenocarcinoma, post-menopausal bleeding was the commonest type of bleeding noted.

**Comparative study of histopathological diagnosis in aub with various studies**

**Table-02: Comparative Percentage of Adenomyosis in Various Studies**

Author	Year of Publication	Percentage(%)
Rizvi G <i>et al.</i> [7]	2013	46.34
Mehla S <i>et al.</i> [8]	2014	46.7
Pathak S <i>et al.</i> [9]	2015	12.5
<b>Present study</b>	<b>2017</b>	<b>29.7</b>

**DISCUSSION**

Abnormal uterine bleeding continues to be one of the most common and perplexing problems in Gynaecological practice. It may present at any age between puberty and menopause. It may be associated with various kinds of histopathological findings in the endometrium and myometrium. Hysterectomy is one of the common surgeries performed in the gynecology department. It is the procedure which gives permanent relief in many non-neoplastic conditions.

This study was conducted to analyze the pattern of lesions in hysterectomy specimens in our institution, correlate the findings with the clinical presentation of type of bleeding observed in patients and to compare our findings with those of other workers.

In the present study, correlation of the pre-operative clinical diagnosis with the final histopathological examination of the hysterectomy specimens was done. AUB in premenopausal women mostly results from benign lesions that include adenomyosis and leiomyoma. Total number of cases studied was 300. Pre-malignant lesion was observed in heavy menstrual pattern. Whereas malignancy was seen in post-menopausal bleeding. The most common age group for presentation of AUB is 36 and 45 years. The endometrial pattern noted is proliferative phase (53%). The most common pattern of bleeding observed was Heavy menstrual bleeding (29.3%) and the histopathological finding noted was adenomyosis (29.7%).

**CONCLUSION**

Abnormal uterine bleeding is the commonest of all gynecological pathology in women of all ages caused by a wide variety of disorders.

The preoperative diagnosis correlates well with the final histopathological diagnosis. However, there are considerable numbers of incidental findings, which are diagnosed only on histopathological evaluation.

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