

Assessment of Endometrial Biopsy in Patients with Abnormal Uterine Bleeding: An Observational Study

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Abstract

Aim: The aim of the present study was to assess endometrial Biopsy Audit and its Clinico-Pathological Correlation in Patients with Abnormal Uterine Bleeding in Bihar region

Methods: The present study was conducted in the Department of Pathology from February 2023 to June 2023. 100 cases were selected in the study.

Results: In the study majority 44% were in the age group 41 to 50 years. In the study 5% were Nulliparous and majority were in para 2 (52%). In the study majority of subjects had Heavy menstrual bleeding (47%). In the study clinically, 46% were diagnosed to have fibroid, 24% had Adenomyosis. In the study 45% had Proliferative, 28% had Secretary, 12% had Endometrial hyperplasia and 8% had Endometrial carcinoma.

Conclusion: Abnormal uterine bleeding is a common diagnosis and the commonest presentation is menorrhagia. Histopathological examination of the endometrium showed a wide spectrum of pathological changes ranging from normal endometrium to malignancy thus necessitating endometrial sampling as an important diagnostic tool in the management of abnormal uterine bleeding. Accurate analysis of endometrial sampling is the key to effective therapy and optimal outcome.

Keywords: Endometrial Biopsy, Abnormal Uterine Bleeding, Clinic-Pathological.

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Introduction

Uterus, the epitome of womanhood is influenced by cyclical hormonal changes under the influence of changes in hypothalamus-pituitary- ovary axis. Menstruation is the cyclic uterine bleeding experienced by all women of reproductive age group. Menstrual disorders are a common indication for medical visits among women of reproductive age and heavy menstrual bleeding affects up to 30% of women throughout their reproductive lifetime. [1,2] Abnormal uterine bleeding (AUB) is one of the most frequently encountered and perplexing condition in adult women. [3] AUB may be defined as any variation from the normal menstrual cycle, & includes changes in regularity & frequency of menses, in duration of flow, or in amount of blood loss. [4] The management of AUB by clinically, investigation and confirmed by ultrasonography but there may be discrepancy in clinical and sonological and histopathological diagnosis. Final

diagnosis always correlated with histopathology study. The treatment for AUB includes both medical therapies and surgical procedures. [5] Surgical options include Hysteroscopic polypectomy, Endometrial ablation, Myomectomy, Hysterectomy. Hysterectomy is one of the most commonly performed surgeries in the world. [6]

Abnormal uterine bleeding (AUB) is a common problem affecting the women of reproductive age group and may also have a significant impact on their physical, social, and emotional aspects directly affecting their quality of life. [7] AUB is a bleeding pattern differing from normal menstrual pattern or after menopause in frequency, duration, and amount of blood flow. [8] According to the International Federation of Gynecology and Obstetrics (FIGO), acute AUB could be classified as “an episode of bleeding in a woman of reproductive age, who is not pregnant, that is of

sufficient quantity to require immediate intervention to prevent further blood loss.” In addition, chronic AUB is “bleeding from the uterine corpus that is abnormal in duration, volume, and/ or frequency and has been present for the majority of the last 6 months.” [9] In the premenopausal period, it may cause anemia, and in the postmenopausal period, it may raise the suspicion of malignancy. [10] AUB is the result of diverse structural and functional etiologies. Due to controversial and non-uniform nomenclature and a lack of standardized methods for investigation and etiological categorization, the investigation and management of AUB patients is greatly affected. To circumvent this, FIGO devised a universally acceptable system of nomenclature and classification, namely PALM–COEIN classification of AUB in 2011. [11]

The aim of the present study was to assess endometrial Biopsy Audit and its Clinico-Pathological Correlation in Patients with Abnormal Uterine Bleeding in Bihar region.

Materials and Methods

The present study was conducted in the Department of Pathology at Anugrah Narayan Magadh Medical College and Hospital, Gaya, Bihar, India from February 2023 to June 2023. 100 cases were selected in the study.

All cases of AUB who underwent hysterectomy were included in the study. The exclusion criteria of this study was a) All AUB patients who didn’t undergo hysterectomy, b) Patients who underwent hysterectomy for causes other than AUB and c) Hysterectomy performed for obstetrical causes.

All admitted patients with symptoms of heavy menstrual bleeding, dysmenorrhea, metrorrhagia, irregular bleeding, postmenopausal bleeding and other symptoms were examined. History included the age, parity, education, socioeconomic status, clinical symptoms, duration of symptoms and amount of blood loss, any associated comorbidities such as hypertension, diabetes and any history of previous hormonal or operative treatment. General physical examination and systemic examination was performed, then a provisional diagnosis was made. Laboratory investigations such as complete blood count, renal function test, thyroid function test, bleeding time, clotting time, Pap smear were done. Ultrasonographic examination of pelvis was done. Endometrial biopsy were preserved in 10% formalin saline and sent histopathological examination and reports were collected. Those cases in which hysterectomy was done were preserved and sent for histopathological examination. The reports were collected and final diagnosis was made. Final diagnosis was compared.

Statistical Analysis

Data was entered into Microsoft excel data sheet and was analyzed using SPSS 22 version software. Categorical data was represented in the form of Frequencies and proportions. MS Excel was used to obtain various types of graphs such as bar diagram. p value (Probability that the result is true) of <0.05 was considered as statistically significant after assuming all the rules of statistical tests.

Results

Table 1: Demographic data

Age in years	N%
31-40	32 (32)
41-50	44 (44)
51-60	20 (20)
>60	4 (4)
Parity	
Nulliparous	4 (4)
1	6 (6)
2	52 (52)
3	22 (22)
≥4	16 (16)

In the study majority 44% were in the age group 41 to 50 years. In the study 5% were Nulliparous and majority were in para 2 (52%).

Table 2: Clinical symptoms

Clinical symptoms	N%
Heavy menstrual bleeding	47 (47)
Dysmenorrhea	16 (16)
Heavy menstrual bleeding+ Dysmenorrhea	5 (5)
Heavy menstrual bleeding+ Irregular bleeding	3 (3)
Irregular bleeding	15 (15)
Metorrhagia	6 (6)
Post-menopausal bleeding	8 (8)

In the study majority of subjects had Heavy menstrual bleeding (47%).

Table 3: Diagnosis

Diagnosis	N%
Fibroid	46 (46)
Adenomyosis	24 (24)
Fibroid+ Adenomyosis	6 (6)
DUB	12 (12)
Polyp	6 (6)
Endometrial carcinoma	4 (4)
Cervical carcinoma	2 (2)

In the study clinically, 46% were diagnosed to have fibroid, 24% had Adenomyosis.

Table 4: Endometrial biopsy

Endometrial biopsy	N%
Proliferative	45 (45)
Secretory	28 (28)
Endometrial hyperplasia	12 (12)
Atrophy	5 (5)
Endometrial carcinoma	2 (2)
Not done	8 (8)

In the study 45% had Proliferative, 28% had Secretory, 12% had Endometrial hyperplasia and 8% had Endometrial carcinoma.

Discussion

Menstruation is a very complex process involving oestrogen and progesterone and their receptors, endometrial vasculature, endometrial vasoactive substances, processes of tissue break down and remodelling and endometrial repair and regeneration. Abnormal Uterine Bleeding (AUB) is defined as any bleeding that does not correspond with the frequency, duration or amount of blood flow of a normal menstrual cycle and could be a sign of simple hormonal imbalance or a serious underlying condition necessitating aggressive treatment including a major surgical procedure. It affects 10-30% of reproductive aged women and upto 50% of perimenopausal women. [12] Pattern and causes of abnormal uterine bleeding differs in different age group and reproductive status of women. Abnormal uterine bleeding is a common reason for women of all ages to consult their gynaecologist and is one of the most common debilitating menstrual problems that had remained one of the most frequent indications for hysterectomy in developing countries. [13] It includes both organic and inorganic causes. The most common presentations are menorrhagia, polymenorrhoea, metrorrhagia and intermenstrual bleeding.

In the study majority 44% were in the age group 41 to 50 years which were comparable to Rizvi et al. [14] In the study 5% were Nulliparous and majority were in para 2 (52%). Mohammad et al [15] in their study found that (65.9%) cases with a parity of 2 which is comparable to our study. Almost similar results were obtained in the studies by Lee NC et al [16] found a mean parity of 3. In the study majority

of subjects had Heavy menstrual bleeding (47%). Nayar et al [17] found HMB 49.1% cases. In the study clinically, 46% were diagnosed to have fibroid, 24% had Adenomyosis. In the study 45% had Proliferative, 28% had Secretory, 12% had Endometrial hyperplasia and 8% had Endometrial carcinoma which were comparable to study by Jairajpuri et al [18] which showed secretory endometrium was most common histopathological diagnosis followed by proliferative endometrium 28.9% and 24.9% respectively. Variation of secretory endometrium ranging from 14% to 63.5% by Bhosle et al, Takreem et al, Mirza et al, Patil et al. [19-22]

Polyp was observed mainly in the perimenopausal and reproductive age group than the postmenopausal age group. This was in contrast with the study of Mariam Abid et al who showed an increased incidence of endometrial polyps in perimenopausal and post-menopausal age group.¹³ The routine non-invasive investigations for abnormal uterine bleeding include complete blood count, platelet count, prothrombin time (PT), Activated partial thromboplastin time (APTT) and liver function test to rule out any coagulation and bleeding disorders. In women of reproductive age group, serum and urine human chorionic gonadotropin (HCG) levels are evaluated to rule out pregnancy. To rule out an endocrine etiology, thyroid function test, follicle stimulating hormone (FSH), lutenizing hormone (LH), prolactin levels are assessed. On ruling out these causes, gynaecologists turn to imaging studies such as pelvic ultrasound (USG), and transvaginal USG and tissue sampling. Dilution and curettage can be a diagnostic as well as therapeutic procedure. [23] The sensitivity of endometrial biopsy for the detection of endometrial abnormalities has been reported to be as high as 96%. [23,24]

Conclusion

Abnormal uterine bleeding is a common diagnosis and the commonest presentation is menorrhagia. Histopathological examination of the endometrium showed a wide spectrum of pathological changes ranging from normal endometrium to malignancy thus necessitating endometrial sampling as an important diagnostic tool in the management of abnormal uterine bleeding. Accurate analysis of endometrial sampling is the key to effective therapy and optimal outcome. This would help in individualizing the management of abnormal uterine bleeding with a view to conserve the uterus.

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