

Original Research

Assessment of histopathological pattern of endometrial biopsies in patients with abnormal uterine bleeding

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Received Date: 18 March, 2024

Acceptance Date: 8 April, 2024

ABSTRACT

Background: 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. The present study was conducted to assess the histopathological pattern of endometrial biopsies in patients with abnormal uterine bleeding (AUB).

Materials & Methods: 296 cases of abnormal uterine bleeding were selected. The functional and organic reasons of AUB were recorded. Histopathological study of endometrial patterns and age specific correlation was done.

Results: The age group 21-30 years had 48, 31-40 years had 144 and 41-50 years had 104 patients. The difference was significant ($P < 0.05$). The cause of AUB was functional in 120 and organic in 176 patients. Histological diagnosis was proliferative phase in 48, simple hyperplasia without atypia in 84, atrophic in 40, secretory phase in 24, chronic endometritis in 40, endometrial polyp in 32, complex hyperplasia with atypia in 12, disordered proliferative phase in 8, and endometrial carcinoma in 8 patients. The difference was significant ($P < 0.05$).

Conclusion: The gold standard diagnostic method for assessing AUB is endometrial histopathological investigation. Endometrial pathologies as cause of AUB are age related.

Keywords: Abnormal uterine bleeding, dilation and curettage, functional, organic.

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INTRODUCTION

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.¹ Variations in the menstrual flow's frequency, volume, and duration are associated with AUB. Any bleeding that occurs in postmenopausal women after a year without menstruation is considered to be of that type.^{2,3} It is challenging to ascertain the prevalence of this symptom since women might not seek medical attention, and doctors might rely on the patient's subjective assessment of their symptoms, which does not satisfy objective standards. The initial step in treating AUB, which has an age-related etiology, is to rule out pregnancy-related reasons using the patient's medical history and the

presence of the human chorionic gonadotropin b-subunit.⁴

Dilation and curettage (D & C) is a surgical technique used for both therapeutic and diagnostic purposes that involves scraping the endometrial lining.⁵ D & C is one therapy option to improve bleeding symptoms after a miscarriage or post-partum diagnosis, as it instantly removes and cleanses the uterus of retained products of conception (RPOC).⁶ D & C is also used to diagnose ectopic pregnancy and distinguish it from miscarriage, which can be dangerous if not caught in time. In a non-gravid setting, D & C takes samples from AUB patients in order to assess the uterine lining.^{7,8}

The present study was conducted to assess the histopathological pattern of endometrial biopsies in patients with abnormal uterine bleeding (AUB).

MATERIALS & METHODS

The present study consisted of 296 cases of abnormal uterine bleeding. All gave their written consent to participate in the study.

Inclusion criteria

All patients who presented to our hospital with a history of AUB and who underwent D and C were included in the study.

Exclusion criteria

Patients with a gestational cause, hemostatic disorder, isolated cervical or vaginal pathology and leiomyoma were excluded. Autolysed and inadequate specimens and sections were excluded from the study.

Data such as name, age, etc. was recorded. Histopathological study of endometrial patterns and age specific correlation was done. The samples underwent standard processing and were stained using Hematoxylin and Eosin (H & E) stain. The AUB histopathology results were divided into organic and functional reasons. The proliferative and secretory phases of the normal cycle endometrium, as well as other aberrant changes such as atrophic endometrium, disordered proliferative endometrium, insufficient secretory phase, and irregular shedding, were included in this study as functional reasons of AUB. Data thus obtained were subjected to statistical analysis. P value < 0.05 was considered significant.

RESULTS**Table: I Distribution of patients**

Age group (years)	Number	P value
21-30	48	0.05
31-40	144	
41-50	104	

Table I shows that age group 21-30 years had 48, 31-40 years had 144 and 41-50 years had 104 patients. The difference was significant (P< 0.05).

Table: II Assessment of parameters

Parameters	Variables	Number	P value
Cause	Functional	120	0.02
	Organic	176	
Histological diagnosis	Proliferative phase	48	0.04
	Simple hyperplasia without atypia	84	
	Atrophic	40	
	Secretory phase	24	
	Chronic endometritis	40	
	Endometrial polyp	32	
	Complex hyperplasia with atypia	12	
	Disordered proliferative phase	8	
	Endometrial carcinoma	8	

Table II shows that causes of AUB were functional in 120 and organic in 176 patients. Histological diagnosis was proliferative phase in 48, simple hyperplasia without atypia in 84, atrophic in 40, secretory phase in 24, chronic endometritis in 40, endometrial polyp in 32, complex hyperplasia with atypia in 12, disordered proliferative phase in 8, and endometrial carcinoma in 8 patients. The difference was significant (P< 0.05).

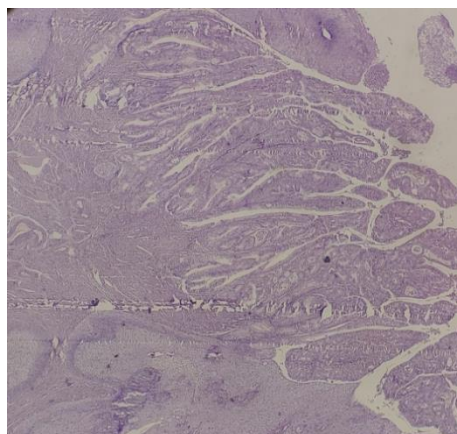


Figure 1: Photomicrograph showing Endometrioid carcinoma with squamous differentiation infiltrating into myometrium [H&E; 40X]

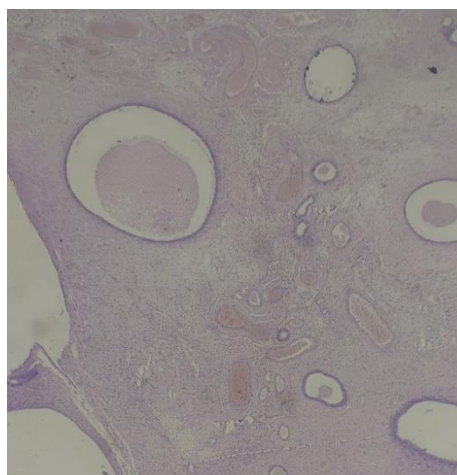


Figure 2: Photomicrograph showing Endometrial polyp having variable sized & dilated endometrial glands. Stroma shows thick-walled blood vessels [H&E; 40X]

DISCUSSION

The causes for AUB can be categorized into: (A) Organic, such as genital tract infections, tumors (benign or malignant), adenomyosis, pregnancy and its complications, systemic disorders and iatrogenic accounting for 20% of cases.^{9,10} (B) Dysfunctional uterine bleeding (DUB) caused by anovulation or oligo-ovulation is responsible for 80% of menorrhagia.^{11,12} The present study was conducted to assess the histopathological pattern of endometrial biopsies in patients with abnormal uterine bleeding (AUB). We found that age group 21-30 years had 48, 31-40 years had 144 and 41-50 years had 104 patients. Whereas, Alshdaifat et al¹³ found that most patients were in the 18-39 years age group, with normal cyclical findings being the most common histopathological finding. In their study malignant lesions were seen in 42 patients and most of these cases were above 50 years. D&C had failed to detect intrauterine disorder in 13.3% of cases in their study, which were later found on hysterectomy specimens. They stated that overall accuracy of D&C in determining the existence of normal versus pathological findings was 75.60%. We observed that the causes of AUB was functional in 120 and organic in 176 patients. Histological diagnosis was proliferative phase in 48, simple hyperplasia without atypia in 84, atrophic in 40, secretory phase in 24, chronic endometritis in 40, endometrial polyp in 32, complex hyperplasia with atypia in 12, disordered proliferative phase in 8, and endometrial carcinoma in 8 patients. The difference was significant ($P < 0.05$). Mune et al¹⁴ found that the most common age group for women presenting with AUB was 41- 50 years (42%) and mean age was 44.2 years. The commonest pattern in their study was normal cyclical endometrium (33.9%): Proliferative and secretory phase. The commonest pathology was endometrial hyperplasia (22.2%). Other causes identified were disordered proliferative endometrium (13.7%), atrophic endometrium (13.2%), benign endometrial polyp (8%), deficient secretory phase (3.3%), chronic

endometritis (2.4%), and endometrial carcinoma (2.3%). They observed that, there was highly significant association between age group and histopathological diagnosis ($p < 0.01$). Shah et al¹⁵ evaluated various histopathological features in D & C and/or hysterectomy in patients presenting with abnormal uterine bleeding. They also assessed the efficacy of D & C as a minimally invasive screening tool in patients with AUB. In their study the age of patients ranged from 21 to 70 years and mean age was 42.6 ± 6.9 years. Maximum patients (53.4%) belonged to 41-50 years of age group and most common histopathological pattern was normal cyclical endometrium (47.3%) followed by endometrial hyperplasia (42.9%), which is similar to our study. Endometrial hyperplasia was most common (57.1%) in perimenopausal age group (41-50 years). The diagnostic accuracy of D & C was found to be 93.4% in their study and amongst all histopathological patterns it was maximum for complex hyperplasia (typical and atypical) and simple atypical hyperplasia. The limitation of this study is the small sample size.

CONCLUSION

Authors found that endometrial pathologies as cause of AUB are age related and gold standard diagnostic method for assessing AUB is endometrial histopathological examination.

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