

FREQUENCY OF VARIOUS HISTOPATHOLOGICAL PATTERNS OF ENDOMETRIAL CURETTING IN WOMEN WITH ABNORMAL UTERINE BLEEDING

Arshad Javid¹, Asma Ambareen², Yougita Khatri², Fauzia Afridi³

¹Department of Medicine/Rheumatology Sohar Hospital, Ministry of Health, Oman

²Department of Obstetrics & Gynaecology, Sohar Hospital, Ministry of Health, Oman

³Department of Obstetrics & Gynaecology, Unit B Khyber Teaching Hospital, Peshawar

Available Online 01-January2020 at <http://www.jkcd.edu.pk>

DOI: <https://doi.org/10.33279/2307-3934.2020.0113>

ABSTRACT

Objective: To determine the frequency of various histopathological patterns of endometrial curetting in women with abnormal uterine bleeding.

Materials and Methods: This Cross sectional (Descriptive) study is carried out in department of Obstetrics and Gynecology, Sohar Hospital, Ministry of Oman from 1st Oct, 2018 to 30th Mar,2019. AUB was diagnosed and D&C were performed. After 15 days patients were followed up and histopathology results were prepared by consultant pathologist

Results: The total of 115 women presenting with abnormal uterine bleeding were observed and included in the study. Average age of the patients was 53.06 years + 7.85 SD with range 40-70. Hyperplasia was the leading histopathological findings in patients with abnormal uterine bleeding was observed in 83 (72.17%) patients, followed by hyperplasia with atypia in 27 (23.48%) patients and malignancy was found in 5 (4.35%) cases.

Conclusion: Hyperplasia was the leading histopathological pattern in patients with abnormal uterine bleeding.

Keywords: Hyperplasia, Malignancy, abnormal uterine bleeding, endometrial carcinoma

INTRODUCTION

Abnormal uterine bleeding accounts for more than 70% of all gynecological consultations in the peri and postmenopausal years.¹ Abnormal peri-menopausal or postmenopausal bleeding (PMB) is associated with endometrial carcinoma in approximately 10% of women.² Endometrial carcinoma is the most common malignancy of the female genital tract in U.K. Any factor that increases exposure to unopposed oestrogen increases the risk of this cancer.

Abnormal uterine bleeding (AUB) is one of the most common and most complex gynecological problems.² It may be defined as any bleeding pattern that differs in frequency, duration and amount

from a pattern observed during a normal menstrual cycle³ and consists of several clinical features such as oligomenorrhea, polymenorrhea, menorrhagia, metrorrhagia, mid cycle spotting and DUB.⁴ AUB accounts for 33% of outpatient referrals in the Gynaecology outpatient department, excluding 69% of referrals in perimenopausal and postmenopausal age group.⁵ Prevalence of AUB in Pakistan is estimated around 5-15%.⁶ Underlying causes of AUB could be anovulation, fibroids, pregnancy, polyps, adenomyosis hormonal imbalance, certain drugs or neoplasia.⁷ Changes associated with hormonal imbalance are more common in younger women of reproductive age. However endometrial hyperplasia and malignancies are more common in older women of premenopausal & post-menopausal age group.⁸ Patients with a history of anovulation, obesity, hypertension, diabetes, and exogenous estrogen use are at an increased risk for hyperplasia and adenocarcinoma. Early evaluation in the perimenopausal

Correspondence:

Dr. Asma Ambareen

Specialist in Obstetrics & Gynaecology, Flat No 307, Block E, Deans Flates, Near Zarghoni Masjid Peshawar.

Email: drarshadkk@yahoo.com

Contact: +923341007031

and postmenopausal women is essential to confirm the exact nature of the lesion and to rule out malignancy.⁹ Dilatation and Curettage is the mainstay of endometrial sampling and is a safe and effective diagnostic step in evaluation of abnormal uterine bleeding especially in perimenopausal females who are at a risk of developing malignancy.¹ Histopathological examination of these endometrial biopsies and curettings is still considered as a safe and effective diagnostic step for diagnosis of the etiology of AUB.¹⁰ Devi J & Aziz N determined the histopathological pattern of Endometrium in woman with AUB in the age group of 40-60 years in their prospective study. The study results showed that 70.4% AUB were due to non organic causes and 22.8% were due to the organic causes. Endometrial Hyperplasia was the most frequent (82.45%) organic cause and Atrophic Endometrium was most frequent (51.42%) nonorganic cause. Further, the overall study results showed that Proliferative Endometrium was present in 36.08 %, Endometrial Polyps 9.65%, Secretory Endometrium 6.53% and Endometritis 5.26% of total study population.¹¹ In a recent cross-sectional study, Deeba F et al determine histological patterns of endometrium in postmenopausal women with abnormal uterine bleeding and they found that the most common histological pattern observed was complex hyperplasia without atypia (30.9%) followed by atrophic endometrium (24.5%), simple hyperplasia (23.6%), malignancy (12.7%), complex hyperplasia with atypia (4.5%) and benign endometrial polyp (3.6%).¹²

AUB is a global phenomenon these days. In Pakistan it is also a common complaint for pathological conditions prevalent in their respective age groups. Dilatation and curettage is a useful and cost effective method of detecting intrauterine pathologies. The aim of this study is to find the histopathological pattern of endometrium in abnormal uterine bleeding in perimenopausal and premenopausal women. To the best of my knowledge, there is insufficient local data is available that discuss the frequency of histopathological patterns of endometrial curetting in women with AUB. So, this study will help us to gather more data about our local population on this topic that will not only useful for future researches but also help to better understand the growing causes of AUB in our population. Furthermore, knowledge of frequent histopathological pattern in local pop-

ulation will help to devise targeted management plan to decrease the overall morbidity and mortality associated with AUB.

MATERIAL AND METHODS

Permission and approval of the study was sought from the hospital ethics committee for conducting the study. One hundred and fifteen patients fulfilling the inclusion criteria were included in the study. Informed consent was taken from all the patients. AUB was diagnosed as per our operational definitions. A detailed clinical history was taken and physical examination was performed by the trainee researcher himself and necessary laboratory investigations and pelvic ultrasound was performed.

Patients with AUB pertaining to uterine fibroid, bleeding diathesis (Von Willebrand disease), hypothyroidism, liver diseases, systemic lupus erythematosus and other endocrinopathies such as diabetes, cushing syndrome etc, hemostatic disorders, isolated cervical or vaginal pathology, pregnancy test and Women with cervical cancer, History/ evidence suggestive of active pelvic infection, Hormone therapy in last 6 months and Patients with ASA 3 & 4 were excluded as these factors act as confounder and lead to bias our study results.

All the enrolled patients were prepared for surgery according to standard preoperative procedure were admit in ward for D&C procedure. D&C were performed under general anesthesia and endometrial curetting were collected. All the specimens were fixed in 10% formalin, processed and embedded in paraffin, and 3-4 μ thick sections were made. Sections were stained with hematoxylin and eosin stain. Patients were kept in ward under observation for bleeding per vagina for one day and discharged next morning. After 15 days patient were followed up and histopathology results prepared by consultant pathologist were observed and recorded. All the data collection were conducted by the researcher herself to maintain data quality and compliance to the study protocol. Data were entered on computer software Statistical Package for the Social Sciences (SPSS) version 20. All the results were presented as tables and graphs.

RESULTS

The total of 115 women presenting with abnormal uterine bleeding were observed and included

in the study.

Average age of the patients was 53.06years+7.85SD with range 40-70 years. Patient's age was divided in three categories, out of which most common age group for patients of abnormal uterine bleeding was less than 50 years. There were 50(43.5%) patients were of the age less than 50 years. Forty (34.8%) patients were in the age range of 51-60 years and 25(21.7%) presented at age more than 60 years of age.

Abnormal uterine bleeding may present with variable patterns. Our study showed 19(16.52%) participants presented with polymenorrhea, 65(56.52%) with menorrhagia, 9(7.83%) with post menopausal bleeding, 17(14.78%) with metrorrhagea and 5(4.5%) with oligomenorrhoea.

Hyperplasia was the leading histopathological findings in patients with abnormal uterine bleeding was observed in 83(72.17%) patients, followed by hyperplasia with atypia in 27(23.48%) patients and malignancy was found in 5(4.35%) cases. Fig 1

Age wise distribution of histopathological pattern among women presented with abnormal uterine bleeding shows that age have significant role. The patients having age less than or equal to 45 years of age have hyperplasia 86% while no malignancy observed. On other hand malignancy was higher in older age group while hyperplasia decreases as the age increases. Table 1

When histopathological pattern were stratified among menstrual history, bleeding pattern and BMI it shows menstrual status and bleeding pattern have significant role while BMI show no role. Table 2

DISCUSSION

Abnormal uterine bleeding (AUB) is a common presenting complaint in the gynecological practice. A systematic clinical approach starting from meticulous history, thorough physical examination, and methodical laboratory investigations will enable the clinician to exclude causes such as pregnancy and pregnancy-related conditions, use of drugs, iatrogenic causes, systemic disorders, and genital tract pathology which may be associated with intermenstrual, postcoital, or heavy menstrual bleeding.¹³ Pregnancy should be considered foremost in women of reproductive age group presenting with AUB.^{14,15}

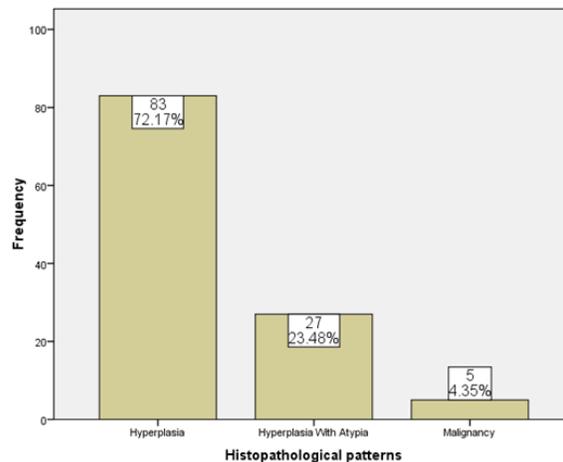


Fig 1: Histopathological Pattern

Table 1: Age wise distribution of histopathological pattern

		Histopathological patterns			Total	p-value
		Hyperplasia	Hyperplasia With Atypia	Malignancy		
Age (in years)	<= 50.00	43	7	0	50	0.021
		86.0%	14.0%	.0%	100.0%	
	51.00 - 60.00	26	12	2	40	
		65.0%	30.0%	5.0%	100.0%	
61.00+	14	8	3	25		
	56.0%	32.0%	12.0%	100.0%		
Total		83	27	5	115	
		72.2%	23.5%	4.3%	100.0%	

Abnormal uterine bleeding is a common gynecological complaints accounting for one third of all outpatient gynecological visit.¹⁶⁻¹⁸ Histopathological evaluation of the curettage sample is necessary in identifying the cause of abnormal uterine bleeding which may include a wide spectrum of diseases of the reproductive system.

Many studies have revealed that occurrence of menstrual disorders of excessive type increased with age.¹⁹⁻²¹ The largest group of patients with abnormal uterine bleeding in our study was in age group 41-50 years accounting for 202/525(38.5%) of cases which is in concordance with (Saraswathi et al)(33.5%)²⁰ (Zeeba et al) (35.9%)²¹ and (Abdulla et al)(32.1%)⁸⁰ in other studies, however our results were less as compared to (Muzzafar et al) (48.1%)¹⁹ (Baral et

Table 2: Stratification of histopathological pattern

		Histopathological patterns			p-value
		Hyperplasia	Hyperplasia With Atypia	Malignancy	
Menstrual	Perimenopausal	29 87.9%	4 12.1%	0 .0%	0.047
	Postmenopausal	54 65.9%	23 28.0%	5 6.1%	
Bleeding Pattern	Menorrhagia	49 75.4%	15 23.1%	1 1.5%	0.043
		Metrorrhagia	10 58.8%	6 35.3%	
	Polymenorrhoea	15 78.9%	3 15.8%	1 5.3%	
		Oligomenorrhoea	2 40.0%	3 60.0%	
	Post-menopausal bleeding	7 77.8%	0 .0%	2 22.2%	
BMI (Kg/m)	<= 25.00	30 68.2%	11 25.0%	3 6.8%	0.541
	26.00+	53 74.6%	16 22.5%	2 2.8%	

al) (47%)²³ and more than (Rasha et al) (26.94%).²⁴

In this study, our patients presented with different types of abnormal uterine bleeding, the commonest presenting feature was menorrhagia (42.7%). Similar findings were shown by (Zeeba et al) (41%)²¹ and (Moghal et al) (41%)²⁵ and was less as compared to (Yusuf et al) (69.65%)²⁶ and (Muzaffar et al) (51.9%).¹⁹

Endometrial hyperplasia is the precursor of carcinoma and usually presents with abnormal uterine bleeding. Endometrial hyperplasia was the commonest structural pathological change between the organic causes and was detected in 83/115(72.17%) of cases and were revealed in 122/525 (23.2%) of the endometrial biopsies obtained in the current work, similar to finding of (Muzaffar et al) (25%).¹⁹ While it was lower than those revealed by (Wahda et al) (30.3%)¹⁶ this difference may be present because their study included only the women above 27 years of age, in whom endometrial hyperplasia was more common. On the other hand in our study results agree

with their finding regarding the age distribution for cases with endometrial hyperplasia¹⁶ as the most of the cases in our study was in the age group of 41-50 years (48.5%). On the other hand endometrial carcinoma was the least common pathology in our study which was found in (2.7%) of cases and accounting for (6.9%) of the organic lesions, all of them were endometrial carcinoma of endometrioid type and all cases of endometrial carcinoma were detected in postmenopausal period, this figure was in agreement with other studies (Wahda et al) (3.9%),¹⁶ (Zeeba et al) (1%)²¹

Malignancy is a major differential diagnosis in women of perimenopausal age group presenting with AUB. In this present study, the frequency of endometrial malignancy was low. This constituted 2.0% with endometrial carcinoma as the majority accounting for 1.8%. Similar incidence of endometrial carcinoma was reported by Sarwa and Haque.²⁸

Gerald et al.¹⁰ observed similar findings accounting for 1.7% while Khan et al²⁹ have given it very low as 0.4% As has been shown in various reports, endometrial carcinoma was found in postmenopausal women.³⁰⁻³² Only two cases were seen in this study similar to reports from comparative studies.³⁰⁻³³ This low frequency can be attributed to the fact that the study population majority consists of women of reproductive age.

Due to its descriptive nature, our study may not be complete in all aspects. However, this study would provide a data base with regard to the histopathological spectrums in abnormal uterine bleeding in our population. This data base may help gynaecologist to modify their treatment strategies. Furthermore, based on common endometrial pathologies in our population, health literacy, screening programme etc., can be constructed effectively.

CONCLUSION

This leads to the conclusion that the endometrial hyperplasia and carcinoma and menorrhagia was the commonest clinical features in abnormal uterine bleeding although most of the cases of abnormal uterine bleeding was due to dysfunctional causes the endometrial hyperplasia was the commonest histopathological changes in abnormal uterine bleeding of organic type. In addition, endometrial hyperplasia and carcinoma together also constitute a significant

proportion of cases among the organic causes. Thus, histopathological evaluation of endometrium is, especially, indicated in women over the age of 40 years presenting with AUB to rule out preneoplastic lesions and malignancies.

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