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ORIGINAL ARTICLE

Morphological Spectrum of Endometrium in Patients with Abnormal Uterine Bleeding

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ABSTRACT

Background: Abnormal uterine bleeding (AUB) is one of the major problems requiring gynecological consultation. Biopsy proved to be gold standard for the accurate diagnosis of abnormal bleeding. It is more frequently observed in perimenopausal females.
Aim: To determine morphological spectrum of endometrium in patients of pre and post-menopausal age groups with abnormal uterine bleeding.
Study Design: Descriptive-cross-sectional study
Place and duration of study: Department of Histopathology, K. E. Medical University Lahore from 31-07-2018 31-01-2019
Methodology: Three hundred and eighty four patients undergoing diagnostic dilatation and curettage or hysterectomy for abnormal uterine bleeding were included. Their demographic features i-e age and address were noted. The biopsies received in Pathology Department were formalin fixed, after tissue processing and cutting the slides were prepared and stained with haematoxylin and eosin stains.
Results: There were 311(80.99%) patients between 25-50 years of age whereas 73(19.01%) between 51-60 years of age. Morphological spectrum of endometrium in patients of pre and post-menopausal age groups with abnormal uterine bleeding shows that 71(18.49%) had proliferative morphology, 58(15.10%) had secretary, 37(9.64%) had simple hyperplasia, 56(14.58%) had complex hyperplasia, 17(4.43%) had atrophic endometrium and 145(37.76%) had other type of morphology (may include mechanical causes such as intrauterine contraceptive device and malignancy).
Conclusion: Morphological spectrum of endometrium in patients of pre and postmenopausal age groups with abnormal uterine bleeding shows proliferative morphology as the common morphology followed by secretary, simple hyperplasia, and complex hyperplasia.
Key words: Abnormal uterine bleeding, Morphological spectrum of endometrium, Proliferative

INTRODUCTION

Endometrium is the mucosal lining of uterine cavity comprising of endometrial glands and stroma which undergoes cyclical changes due to the effect of hormones during the reproductive age[1]. Abnormal uterine bleeding (AUB) is the bleeding from uterus which is acyclic, abnormal in volume and/or timing and the condition is persistent for the last 6 months[2].

Abnormal uterine bleeding is a sign of underlying condition, not a disease itself. Seventy percent of such cases are presented in elderly females.[3] It can occur in different forms including metrorrhagia, polymenorrhea, menorrhagia, menometrorrhagia and polymenorrhagia.[4] Recent Classifications is however based on organic lesions such as adenomyosis, malignancy, polyps, ovulatory disorders, leiomyoma and iatrogenic as clinical risk factors[5,6].

Various studies[7-9] from Pakistan have reported that proliferative (35.2%) and atrophic (25.8%) endometrium to be the most common morphology in perimenopausal and postmenopausal patients respectively, followed by endometrial hyperplasia in both age groups[10]. A research carried out in Khatmandu, Nepal on patients with AUB concluded that 41% of the cases were with normal cyclical endometrium.[11] Majority of the cases of AUB in reproductive age group are perimenopausal and have proliferative endometrium[12-15].

According to the Federation International de Gynecologie et d'Obstetrique (FIGO) the causes of abnormal uterine bleeding include polyp, adenomyosis, leiomyoma, malignancy, coagulopathy, ovulatory disorders, endometrial, iatrogenic and not otherwise specified[2] .

The purpose this study is to compile data of the patients of both pre and postmenopausal age groups in local population and to minimize the communication gap between pathologists and gynaecologists that would ultimately improve patient management.

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MATERIALS AND METHODS

This descriptive cross-sectional study was carried out at Department of Histopathology, King Edward Medical University Lahore from 31st July 2018 to 31st January 2019 after getting permission from IRB. Three hundred and eighty four patients undergoing diagnostic dilatation and curettage or hysterectomy for abnormal uterine bleeding were enrolled. Patients age 25-60 years, females of pre- and post-menopausal age groups, history of abnormal uterine bleeding for at least last six months were included. All cases with history of chemo/radiotherapy and unfixed samples were excluded. Their demographic features i-e age and address were noted. The biopsies received in Pathology Department were formalin fixed, after tissue processing and cutting the slides were prepared and stained with haematoxylin and eosin stains. Histopathological examination was done by consultant histopathologist under light microscope. All of the biopsies were classified into proliferative phase, secretary phase, simple and complex hyperplasia and atrophic endometrium. The data was analyzed using the softwareSPSS-20.

RESULTS

Three hundred and eleven (80.99%) were between 25-50 years of age whereas 73(19.01%) were between 51-60 years of age, mean age was 41.75±8.29 years and mean body mass index of the patients was 30.12±2.50 kg/m^2 (Table 1). Morphological spectrum of endometrium in patients of pre and post-menopausal age groups with abnormal uterine bleeding shows that 71(18.49%) had proliferative morphology, 58(15.10%) had secretary, 37(9.64%) had simple hyperplasia, 56(14.58%) had complex hyperplasia, 17(4.43%) had atrophic endometrium and 145 (37.76%) had other type of morphology (Table 2).

Table 1: Descriptive statistics of the patients (n=384)

Variable	No.	%
Age (years)		
25 – 50	311	80.99
51 – 60	73	19.01
Mean age	41.7±8.29	
Body mass index (kg/m^2)	30.1±2.50	

Table 2: Morphological spectrum of endometrium in patients of pre and post menopausal age groups with abnormal uterine bleeding (n=384)

Morphological spectrum	No.	%
Proliferative	71	18.49
Secretory	58	15.10
Hyperplasia with atypia	37	9.64
Hyperplasia without atypia	56	14.58
Atrophic endometrium	17	4.43
Others	145	37.76

DISCUSSION

Endometrial disorders are commonly reported by females of all the ages worldwide. These disorders escalate the chances of mortality and morbidity in women manifolds. A large number of females report abnormal uterine bleeding that usually associated with intrauterine pathology or hormonal impairment and detailed physical and clinical examination leads to accurate diagnosis of the problem.[8,16]

The current study was to compile data of the patients of both pre and post-menopausal age groups in local population. This may be helpful for the gynecologists to prompt diagnosis and early intervention for better prognosis. Atypical uterine bleeding is common in all age group but women of perimenopausal age group especially 40-50 years appeared to be affected most.[17-19] This became evident from the present study as well in which highest frequency was observed within perimenopausal age group. Proliferative, secretory, atrophic endometrium and endometrial hyperplasia are presented in uterine bleeding as reported by study from Southern Pakistan with a percentage of 6.7%, 14.7%, 3.3% and 1.2% respectively. These findings are in agreement with current study findings. However contradictory results have also been reported from northern areas of Pakistan with majority of patients with proliferative endometrium.[8] The endometrium can either be proliferative or secretary with few studies emphasizing on high percentage of proliferative endometrium than secretory endometrium.[9,10] Whereas on the other hand, other researches elaborated that, proliferative and secretory endometrium was the main histopathological finding for abnormal uterine bleeding.[20-22] In present study, similar results have been found.

Uterine bleeding in pre and postmenopausal women is mostly either without organic cause or secondary to hyperplasia/carcinoma. This study signifies the importance of endometrial sampling as a screening test to sort out cause of abnormal uterine bleeding such as malignancy.[23-26] This will prove beneficial for timely patient management to combat with the severity of the disease.

CONCLUSION

The morphological spectrum of endometrium in patients of pre and postmenopausal age groups with abnormal uterine bleeding showed proliferative morphology as the most common morphology followed by secretary, simple hyperplasia, and complex hyperplasia.

Conflict of interest: Nil

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