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Histopathological findings of Post-Menopausal bleeding in Ethiopian women

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Abstract

Background: Postmenopausal bleeding is an alarming sign that may be associated with uterine malignancy. In recent years about 60% of women with post menopausal bleeding are said to have no organic cause in developed countries. There is no data concerning about this issue in Ethiopia.

Objective: To determine histopathologic etiology of postmenopausal bleeding.

Methods: Retrospective analysis of four years biopsy material from women with postmenopausal bleeding.

Results: Four hundred seventy five patients with postmenopausal bleeding were included in the study. Malignant lesions of the genital tract were found in 289 (60.8%) cases. Cervical carcinoma was seen in 245 cases, which accounted for 84.8% of all malignant lesions. Cervical carcinoma was responsible for 51.6% cases of all postmenopausal bleeding patients. Endometrial carcinoma was seen only in 31(10.7%) cases among the malignant cases. In this study underlying cervical malignancy was found in approximately one of every two patients with postmenopausal bleeding. The result of this study doesn't show the dramatic decrease in the prevalence of malignancy as a cause of postmenopausal bleeding seen in Europe and USA.

Conclusion: The famous dictum that "Post Menopausal bleeding must be considered as indicative of malignant disease until proven otherwise" still holds true in our circumstance. Priority should be given to introduce a screening method such as cervicography, gynecoscopy and pap smear of the cervix to effectively manage gynaecological malignancies in elder women. [Ethiop. J. Health Dev. 2001;15(1):39-44]

Introduction

Cessation of menstrual bleeding is the cardinal symptom of the menopause. The minimum age that menopause can occur is forty years. Postmenopausal bleeding is defined as uterine bleeding following permanent cessation of menses (at least for one year) due to loss of ovarian follicular activity, i.e. menopause. The term "postmenopausal bleeding" (PMB) generally implies bleeding from the uterus and that is essentially the only bleeding of importance at the postmenopausal age; but in practical sense the term must include some instances of bleeding from the vagina, urethra or vulva, in which case a uterine source is held suspect until excluded. The aetiology of postmenopausal bleeding has received the attention of a number of investigators(1,2). In earlier reports, the incidence of endometrial carcinoma ranged between 53% and 90% (3,4,5). The awareness of the serious implications of PMB among patients and

physicians resulted in an earlier detection of malignancy. In later publications endometrial adenocarcinoma accounted for 1.5% to 13.5% of patients with PMB (6,7). In recent publications in about 60% of women with PMB no organic cause was found (8,9). Microscopic study of the biopsy specimen is imperative for proper diagnosis and therapy of benign as well as malignant lesions.

The aim of this retrospective study was to know the histopathologic causes of postmenopausal bleeding and also to assess the rate of malignancy as a cause of postmenopausal bleeding.

Methods

A retrospective review of records has been undertaken in women with postmenopausal bleeding. The cause of PMB was diagnosed by histopathological examination of gynecological specimens submitted to the department of pathology, Faculty of medicine, Addis Ababa University (FM, AAU). A woman was considered to be postmenopausal if more than one year had elapsed since her last menstrual bleeding. All women who had undergone histopathologic examination for postmenopausal bleeding between January 1994 and December 1997 were included in this study. The following information were collected: patient's age, biopsy site, the interval between menopause and onset of PMB and histopathologic diagnosis from the request forms filed in the department. All biopsies were paraffin sections and stained with haematoxylin and eosin. The histopathologic reports which were seen by one senior resident and confirmed by one pathologist were taken as a final diagnosis. Duplication search was made by name and previous biopsy numbers. No hormonal parameters were used to characterize the women as postmenopausal.

The histopathologic diagnoses were based on morphologic features of histopathology slides. The available data were analysed by using simple descriptive statistics and Epiinfo statistical package.

Results

Four hundred and seventy five patients with postmenopausal bleeding were reviewed. The youngest was 41 years and the oldest was 85 years old. The mean and median were 56.5 and 55 years respectively. As shown in figure 1, the peak age of postmenopausal bleeding was between 50 and 54 year age bracket. The types of biopsies were the following: 200 cervical punch, 126 endometrial curettage, 24 both endometrial curettage and cervical punch, 120 hysterectomy with or without salpingo-oophorectomy, 4 vaginal, and one vulval. The commonest cause of PMB was cervical carcinoma which accounted for 245 cases (51.6%), followed by endometrial hyperplasia 34 (7.2%). Endometrial carcinoma was responsible for 6.5% of cases (Table 1). Cervical carcinoma was found in approximately one of every two patients with postmenopausal bleeding. In general malignant lesions accounted for 289 (60.8%) cases of PMB whereas benign lesions were responsible for 186 (39.2%) (Table 2). Table 3 shows the relative frequency of endometrial carcinoma and cervical carcinoma as causes of PMB. Cervical carcinoma accounted for 84.8% of all malignant lesions whereas endometrial carcinoma for 10.7%. So endometrial carcinoma was found to be a less common cause of postmenopausal bleeding than cervical carcinoma. The ratio of endometrial carcinoma to cervical carcinoma was approximately 1:8.

The interval between the cessation of menses and the onset of the postmenopausal bleeding ranges between 1 year and 25 years, the average being 7.7 years. The onset of PMB was seen

more often in the earlier postmenopausal years i.e. less than ten year. Its frequency decreased as time goes by.

Discussion

Detailed investigations increase the number of organic causes of PMB. The gynecologists selected the appropriate site of biopsy based on the physical findings of the patients. Most patients had biopsy either from cervix or endometrium and only few had biopsy from both sites. Therefore, simultaneous pathologies both in the cervix and endometrium might have been missed. But only 4% of cases had no organic lesion indicating appropriate selection of the biopsy site by the gynecologists. The rate of malignancy in PMB varies from country to country. Brewer and miller analyzed PMB and reported an incidence of malignancy of 26.6%(10). Luiz et al from South Africa studied 100 consecutive patients for etiological distribution of PMB and malignant lesions of the genital tract were found in 54% (11). In our series the rate of malignancy was 60.8%. This is slightly higher than the previous reports. The reason for high rate of malignancy as a cause of PMB in developing countries compared to developed world might be the lack of accessibility for modern health care, the absence of screening method such as pap smear for detection of precursor lesion of cervical cancer in the former countries. The high prevalence of Human Immunodeficiency Virus (HIV) and Human Papilloma Virus (HPV) in the developing countries can as well be a significant contributor for the high rate of cervical malignancy. Cervical cancer has been recently recognized as an AIDS defining disease in patients infected with HIV (12,13). The other reason could be the majority of patients in the developing world are often neglected or are ignorant of the importance of prompt investigation of postmenopausal bleeding. It is difficult to know the true incidence of malignancy in postmenopausal bleeding because many patients may fail to seek medical care for this sign. On the contrary the low incidence of malignancy in developed countries could be due to increased education and awareness among the public which impels them to seek attention more promptly for such bleeding. Physicians are also more insistent on prompt investigation in all postmenopausal bleeding. The other reason could be a wide spread and thorough use of cervical smears which has lowered the incidence of advanced cervical carcinoma which in most series has been responsible for a large proportion of the cancers (14,15,16).

In this study the causes of PMB in decreasing order of frequency were:- cervical carcinoma (51.6%), endometrial hyperplasia (7.2%), endometrial or cervical polyp (7%), cervicitis (6.9%), endometrial carcinoma (6.5%), endometrial atrophy (4.4%), no organic cause (4.0%), cervical dysplasia (3.2%). As it is described above the commonest cause of PMB is cervical cancer and this correlates with reports from other developing countries (15-17). This is in sharp contrast with the industrialized countries where the causes of PMB in decreasing order of frequency are:- exogenous estrogen (30%), atrophic endometritis/vaginitis (30%), endometrial cancer (15%), endometrial or cervical polyp (10%), endometrial hyperplasia (5%) (18).

The ratio of malignancy in the uterine corpus to cervix was approximately one to eight which contrasts strongly with the one to one and two to one ratios (10) in old reports dating back many years (11,12). Cancer of the cervix is the third most common form of cancer in women worldwide and the leading female cancer in sub-Saharan Africa, central and South America, and South east Asia (15,16). In many developing Countries the uterine cervix is one of the most prevalent sites for cancer comprising approximately 25% of all female cancers. In industrialized populations, the disease is less common.

Cervical cancer is a preventable cancer because it has a long preinvasive state and also the preinvasive stage can be detected by cervical cytology screening program, and because the treatment for preinvasive lesions is effective (17). Screening for cervical cancer by examination of a cervical smear is widely recognized as leading to reduction in the mortality from cervical cancer (20). Where effective national screening programs have been introduced, as in Finland, mortality has fallen substantially (13). It has been estimated that screening at 3 year intervals for women aged 35-64 can reduce the incidence of invasive cervical cancer by over 90% (19). It has also been demonstrated to be cost effective in elderly women particularly among those who haven't been screened regularly (21).

Even though this is the case, there is a tragic high incidence of cervical cancer in developing countries such as Ethiopia (17). Eighty percent of the 466,000 cases of cervical cancer annually occur in the developing countries, where only 5% of the female population had a pap smear within five years. Cervical cancer is the leading cause of cancer death. In contrast, in the industrialized countries, where 85% have had at least one pap smear in their life time, cervical cancer is only the 10th leading cause of cancer death (22).

The onset of PMB was seen more in the earlier postmenopausal years. This might be due to the natural course of cervical cancer since it is considered as cancer caused by HPV and the patients contract the infection in their sexually active age and develop the cancer few years later following menopause.

In summary, underlying cervical malignancy was found in approximately one of every two patients with postmenopausal bleeding. The result of this study doesn't show the dramatic decrease in the prevalence of malignancy as a cause of postmenopausal bleeding seen in Europe and USA. The famous dictum that "Post Menopausal bleeding must be considered as indicative of malignant disease until proven otherwise" still holds true in our circumstance. Cervical malignancies must be ruled out in all cases of PMB. Priority should be given to introduce screening methods for cervical cancer such as cervicography, gynoscopy and pap smear at different levels of health care to effectively reduce the prevalence of cervical cancer among elder women. In addition, the significant contribution of cervical cancer as a cause of PMB and its prevention should be brought into the public awareness.

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Tables

Table 1: The specific causes of postmenopausal bleeding in Department of Pathology FM, AAU, 1994-1997

S/N	Cause	No	%
1	Cervical Carcinoma	245	51.6
2	Endometrial hyperplasia	34	7.2
3	Cervicitis	33	6.9
4	Endometrial Carcinoma	31	6.5
5	Endometrial atrophy	21	4.4
6	No organic cause	19	4.0
7	Endometrial Polyp	18	3.8
8	Cervical Polyp	15	3.2
9	Cervical Dysplasia	15	3.2
10	Miscellaneous*	44	9.3
	Total	475	100

* Includes myoma (14), Endometrial infection (12), Vaginal Carcinoma (4), Mixed Mesodermal tumor (4), Molar pregnancy (2), Choriocarcinoma (2), benign Ovarian tumor (2), one each leiomyosarcoma, Melanoma, Uterine prolapse, vulval carcinoma

Table 2: Types of lesions causing post-menopausal bleeding

Type of Lesion	No	%
Malignant	289	60.8
Benign	186	39.2
Total	175	100

Table 3: Types of Malignant lesions causing Postmenopausal bleeding

Type	No	%
Cervical Carcinoma	245	84.8
Endometrial Carcinoma	31	10.7
Misellaneous	13*	4.5
Total	289	100

* Vaginal Carcinoma (4), Mixed Mesodermal tumor (4), Choriocarcinoma (2), one each leiomyosarcoma, Melanoma, Vulval carcinoma

Figures

Figure 1: Age distribution of patients with post menopausal bleeding, FM, AAU, 1994-97

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