

Juornal of Babylon University, 18(3). 2010

**Postmenopausal bleeding : Clinicopathological Study In Babel
province between the years 2000 -2009**

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Abstract

Normal menstruation is defined as bleeding from secretory endometrium associated with an ovulatory cycle not exceeding a length of 5 days. Any bleeding not fulfilling these criteria is referred to as an abnormal uterine bleeding. Some of these are the result of an identifiable pathological lesion, such as endometriosis, submucous myoma, endometrial polyp, or cancer, particularly in the postmenopausal patient. Postmenopausal bleeding is considered an important and alarming symptom both to the patient and to the gynecologist, and is requires as complete evaluation as possible in order to ensure the absence of malignancy and to identify and treat high risk patients such as those with endometrial hyperplasia. The aim of the present study was to investigate the clinical significance and endometrial pathology in patients with postmenopausal bleeding (PMB) in terms of etiology, risks factors, incidence of malignancy, and histopathological evaluation.

304 cases of PMB admitted to Babylon Teaching Hospital for Gynaecology & Paediatrics from 2000-2009 underwent a detailed history, clinical examination and full investigation, including full laboratory investigation, pelvic ultrasound, and examination under anesthesia (EUA) with dilatation and curettage and endometrial sampling. The age range of the patient was from (45 to 77 years) with a mean of (49 years). The Results showed that Benign pathology was found in (167 / 304) cases. These included senile atrophic endometrium, endometrial hyperplasia, endometritis, endometrial polyps, cervicitis, and cervical polyps. Malignant pathology was found in (27) cases including (12) cases of cancer of the cervix and (15) cases of adenocarcinoma of the endometrium.

It is concluded that postmenopausal bleeding is an important symptom and requires careful and prompt evaluation to eliminate the possibility of malignancy as quickly as possible

INTRODUCTION

Life expectancy of women has increased during this era, hence, many will experience postmenopausal period. Post menopausal bleeding is defined as bleeding from the genital tract one or more years after a woman's last period. It is a common problem, representing 5% of all gynaecology outpatient attendances¹⁻³ and it is an alarming symptom in this age group. It is not always possible to assign pathologic cause with certainty in postmenopausal bleeding (PMB). The dictum is "Postmenopausal bleeding indicates malignancy until proved otherwise".⁴⁻⁶

Aetiology of post-menopausal bleeding include: non-gynaecological causes like trauma or a bleeding disorder, use of hormone replacement therapy, vaginal atrophy, endometrial hyperplasia (simple, complex, and atypical), endometrial carcinoma usually presents as PMB but 25% occur in premenopausal women. Other causes include endometrial polyps or cervical polyps, carcinoma of cervix, uterine sarcoma, ovarian carcinoma (especially oestrogen-secreting ovarian tumours), vaginal carcinoma which is very uncommon & carcinoma of vulva may bleed, but the lesion should be obvious.

Risk factors for endometrial cancer include: exogenous oestrogens, tamoxifen therapy, polycystic ovary syndrome, hereditary non-polyposis colorectal carcinoma, obesity combined with diabetes. However, the use of combined oral contraceptives decreases risk.⁷⁻¹⁵

Where sufficient local skills and resources exist, transvaginal ultrasound is an appropriate first-line procedure to identify which woman with post-menopausal bleeding is at higher risk of endometrial cancer.

The mean endometrial thickness in post-menopausal women is much thinner than in premenopausal women. Thickening of the endometrium may indicate the presence of pathology. In general, the thicker the endometrium, the higher the likelihood of important pathology i.e. endometrial cancer being present. The threshold in the UK is 5mm; a thickness of >5mm gives 7.3% likelihood of endometrial cancer.³⁰ A thickness of <5mm has a negative predictive value of 98%.³¹ A recent meta-analysis found that a TVUS result of 5 mm or less reduced the risk of disease by 84%.²⁶ Some pathology may be missed and it is recommended that hysteroscopy and biopsy should be performed if clinical suspicion is high.³² The accuracy of assessing endometrial thickness in women with diabetes and obesity has been questioned,²⁸⁻³⁰ but models have been developed to take personal characteristics into account when predicting the risk of cancer.²⁴

Hysteroscopy and biopsy (curettage) is the preferred diagnostic technique to detect polyps and other benign lesions. Hysteroscopy may be performed as an outpatient procedure, although some women will require general anaesthetic. A significant development has been direct referral to 'one stop' specialist clinics.²⁵⁻²⁸ At such clinics several investigations are available to complement clinical evaluation, including ultrasound, endometrial sampling techniques and hysteroscopy. Following such assessment reassurance can be given or further investigations or treatment can be discussed and arranged.

Aims and objectives of study:

- 1- To ascertain aetiological factors of postmenopausal bleeding.
- 2- To investigate the clinical significance of postmenopausal bleeding in terms of risks factors, incidence of malignancy, and histopathological evaluation.

Patients and Methods:

This was a retrospective study, conducted over a period of 10 years between January 2000 and February 2009 in surgical pathology department. A total of 304 cases who presented clinically with postmenopausal bleeding were selected. All the patients gave history of genital tract bleeding varying from spotting per vagina, scanty flow, moderate to profuse bleeding or post coital bleeding.

The age of the patients was recorded. Full assessment done by history, physical examination & investigations which include complete blood picture, fasting blood sugar & pelvic ultrasound. None of the women was on hormone replacement therapy. Diagnostic curettage was done. The specimens received varied from endometrial biopsy/curettage, cervical biopsy, to hysterectomies (304 cases in total). The slides were reviewed and classified using current pathological criteria.

The endometrial specimens were divided into the following histological categories: endometrial atrophy, endometrial polyp, endometrial hyperplasia and endometrial carcinoma. Cervical lesions were classified as inflammatory, polyp, dysplasia and carcinoma. Of the 304 cases, 27 biopsies were malignant .They were followed by hysterectomy of which 12 were cases of cervical cancer and 15 cases endometrial carcinoma.

Results: Postmenopausal bleeding is an important symptom, of the 304 cases who presented with this symptom 194 found to have genital tract pathology. Of these pathologies 86% were benign while 27% were malignant. Patients at 55-64 years of age were the mostly affected women by postmenopausal bleeding whether due to benign or malignant pathology.

Table 1. The distribution of benign & malignant pathologies in different age groups.

Age groups (yrs)	Benign pathology No.	Percentage %	Malignant pathology No.	Percentage %	Total
45-54	63	37.7	9	33.3	72
55-64	81	48.5	12	44.4	93
65-74	16	9.6	4	14.8	20
75	7	4.2	2	7.5	9
Total	167	100	27	100	194
Percentage	86%		14%		100

Endometrial atrophy was the most frequent benign pathology found. Others include endometrial hyperplasia, endometrial polyp, cervicitis, cervical ectropion, cervical polyp, vaginal ulcer & cervical dysplasia.

Table.2 Distribution of different benign pathologies in different age groups.

Age groups (yrs)	Endometrial atrophy	Endometrial hyperplasia	Endometrial polyp	cervicitis	Cervical ectropion	Cervical polyp	Vaginal ulcer	Cervical dysplasia
45-54	37	11	11	1	1	1	1	0
55-64	21	11	12	8	9	8	12	0
65-74	13	0	0	0	0	0	0	3
75	0	0	0	0	3	1	0	3
Total	71	22	23	9	13	10	13	6
Percentage	42%	13.2%	13.7%	5.4%	7.7%	6%	8.4%	3.6%

Malignant pathologies found were endometrial carcinoma (55.6%) & cervical carcinoma (44.4%). These pathologies found mostly in patients aged 55-64 years.

Table .3 The distribution of malignant pathologies in different age groups.

Age groups (yrs)	Ca cervix	Ca endometrium
45-54	4	5
55-64	5	7
65-74	2	2
75	1	1
Total	12	15
Percentage	44.4%	55.6%

Discussion

Genital tract bleeding in postmenopausal women is a sign of underlying pathologic condition. The peak incidence of malignancy was observed in the age group of 55-64 years.

In this study, the atrophic endometrium was the predominant finding (42%) among benign pathologies, which is comparable to the observations of Lidor et al.³ The exact cause of bleeding from atrophic endometrium is not known. It is postulated to be due to anatomic vascular variations or local abnormal haemostatic mechanism.¹⁶⁻¹⁹ Speert considers that thin walled veins superficial to expanding cystic gland make the vessel vulnerable to injury especially if cyst ruptures.²⁰⁻²³

Endometrial polyp (13.7%) & endometrial hyperplasia (13.2) were the second frequent causes of PMB in our study. These results are similar to those found by Bafna et.al. when endometrial polyp & endometrial hyperplasia constituted 24.5% of the causes of postmenopausal bleeding.²⁸

. Cervical lesions include infective and inflammatory conditions like cervicitis (5.4%), cervical ectropion (7.7%) & endocervical polyp (6%). The cervix and vagina are more susceptible to trauma and infection in postmenopausal age group, because of atrophic changes in cervix and with change in vaginal pH. There was a single case of ovarian granulosa cell tumour, which showed endometrial hyperplasia responsible for PMB.

The incidence of endometrial adenocarcinoma is 55.6 % of malignant pathologies, which is similar to studies done by Escoffery et al.²⁹, while the carcinoma of cervix contributes to 44.4% malignant pathologies. The incidence of Ca cervix was more in women aged 55-64 years & this is similar to a study done by Udiqwe et al. who found that Ca cervix present with postmenopausal bleeding in 51% of cases & that it mostly affect women at 51-60 years.²⁷

Conclusions & Recommendations:

1. Postmenopausal bleeding is a symptom not to be underestimated.
2. The results showed that atrophic endometrium was the most common cause.
3. Among the malignant causes, cervical carcinoma accounts for 44.4% of malignant pathologies responsible for postmenopausal bleeding. This high incidence may point to the need for more public awareness to integrate routine Pap smear screening.
4. A definitive diagnosis of post-menopausal bleeding is made by histology.
5. Malignancy cannot be ruled out until proved otherwise and justifies a thorough evaluation of patients with this symptom along with histopathological confirmation.

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