

DOI: <https://dx.doi.org/10.18203/2320-1770.ijrcog20210008>

Original Research Article

A two-year study on postmenopausal bleeding at a tertiary institute

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Received: 13 December 2020

Accepted: 29 December 2020

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ABSTRACT

Background: The life expectancy of women shows an increase as a result of which women experience a long postmenopausal phase. Postmenopausal bleeding is a worrisome symptom occurring in 10 % of the women, making them seek a gynaecology opinion at the earliest. Women in developed countries have a predilection for developing endometrial cancer whereas cancer cervix still dominates in the developing countries. This prospective study was carried out on 75 women presenting with postmenopausal bleeding to the gynaecology clinic at a tertiary hospital set up. The study aimed to find the incidence of postmenopausal bleeding, age distribution, causes and different evaluation methods to confirm the diagnosis.

Methods: The present study is a prospective study conducted on 75 postmenopausal women reporting with postmenopausal bleeding at the gynaecology clinic at a tertiary care hospital.

Results: Menopause was noted above 45 years in 84% of the patients and 16% were in 40-45 years age. Postmenopausal bleeding was observed in 50-60 years in 56% of women and 30% above 60 years. The medical problems associated were hypertension (20%), diabetes (11%), obesity (22%), hypothyroidism (4%). 53 women had benign causes while 22 had malignancy.

Conclusions: Benign lesions of the genital tract are common causes of postmenopausal bleeding. Carcinoma cervix and endometrium classically present with postmenopausal bleed. Strong suspicion, thorough evaluation and early diagnosis improve the quality of life and reduce the morbidity and mortality.

Keywords: Postmenopausal bleeding, Carcinoma cervix, Carcinoma endometrium, Endometrial thickness, Endometrial polyp

INTRODUCTION

Menopause is the permanent cessation of menstruation due to loss of ovarian activity. It occurs at a mean age of 51 years.

Menopause is defined retrospectively as the time of the final menstrual period followed by 12 months of amenorrhea.

Post menopause describes the period following the final menses. Despite a great increase in the life expectancy of women, the age at menopause remains remarkably constant. The life expectancy of women shows a steady

rise in this era, hence women experience a longer postmenopausal phase. A woman in the United States today will live approximately 30 years, or greater than a third of her life, beyond the menopause. WHO has defined postmenopausal bleeding as bleeding from the genital tract occurring after menopause. The average age of menopause is 45–52 years.¹ Approximately 10% of the postmenopausal women develop postmenopausal bleeding and this alarming symptom in women makes them seek gynaecologist's opinion immediately and form a significant proportion of referrals due to suspicion of underlying malignancy.² Cervical cancers is the fourth common cancer in the world and India accounts for 25% of the burden worldwide. Nearly 70% of the women

present to the hospital in an advanced stage making the 5-year survival rate of only 50%.³ In developing countries premalignant and malignant lesions of the cervix form the bulk of postmenopausal bleeding.⁴ Worldwide, cervical carcinoma continues to be a significant health care problem. In developing countries, where health care resources are limited, cervical carcinoma is the most frequent cause of cancer death in women. In developed countries the main cause of postmenopausal bleeding is endometrial malignancies.⁵ Endometrial carcinomas is the most common cancer, ranking behind breast, lung, and colorectal cancers, and the eighth leading cause of death from malignancy in women.

Endometrial cancer is a disease that occurs primarily in postmenopausal women and is increasingly virulent with advancing age. Certain factors like postmenopausal use of hormone therapy, the availability of easily applied diagnostic tools and a clearer understanding of premalignant lesions of the endometrium have led to an increase in the number of women diagnosed with endometrial cancer. The cure rates of both cervical and endometrial cancers are high when detected early. Overall 5-year survival rate in endometrial cancer is approximately 75%. The common precursor for endometrial cancer is hyperplasia with atypia⁶. This prospective study is conducted at the gynaecology clinic at a tertiary care hospital on 75 women who presented with postmenopausal bleeding.

METHODS

The study is a hospital based prospective study conducted in the department of Obstetrics and Gynaecology of Narayana medical college hospital, a tertiary care institute, from May 2018 to April 2020 for a period of 2 years after obtaining approval from ethical committee of the institution.

Postmenopausal women attending the menopause special clinic and gynaecology clinic with history of bleeding episodes were enrolled in the study.

Inclusion criteria

All the postmenopausal women with complaints and history of vaginal bleeding were included in the study.

Exclusion criteria

Patients with bleeding disorders and dyscrasias, on anticoagulant therapy, women who attained premature menopause naturally or due to surgery, irradiation or chemotherapy, age less than 40 years, women on hormone replacement therapy and injuries to genital tract were excluded from the present study.

Informed and written consent for history, examination and evaluation were taken. A questionnaire was prepared and detailed history was taken with regard to the onset of

bleeding, duration, amount, mass per abdomen, last menstrual cycles before menopause, post coital bleeding, smoking, parity, multiple partners and family history of malignancies. The history of bleeding varied from spotting per vaginum, brownish discharge, scanty flow to moderate flow and profuse bleeding presenting 6 months or more after attainment of menopause.

Patients were thoroughly evaluated for other medical co morbidities, abdominal examination, local and speculum examinations were done. Investigations like Pap smear were done when cervix looked normal in speculum. Abdominal and transvaginal ultrasound was done for all patients with postmenopausal bleeding to look for space occupying lesions in uterus, endometrial thickness, its homogeneity, endometrial myometrial interface. Cervical biopsy was taken if cervical lesions were spotted. Endometrial sampling using pipelles aspirator was done in the out-patient department when the endometrial thickness was more than 4 mm. Fractional curettage and hysteroscopic directed biopsy were proceeded when there was a high suspicion of cancer endometrium.

Pathologists extended their support by analysing the histopathology of the endometrial curetting. Results were analysed and plotted in Microsoft excel sheet.

RESULTS

Total 75 women were selected for the present study after applying inclusion and exclusion criteria. The age of menopause was between 40 and 45 years in 16% of the women, 39% of women were between 45 and 50 years and 45% were above 50 years of age.

Table 1: Distribution of age, parity and medical history of menopausal women.

Variables	Number of women	Percentage
Age at menopause (in years)		
40-45	12	16
45-50	29	39
>50	34	45
Age of postmenopausal bleeding (in years)		
45-50	11	14
50-60	42	56
>60	22	30
Parity		
Nullipara	8	11
Para 2	17	23
>2 Para	50	66
Medical disease		
Hypertension	15	20
Diabetes mellitus	8	11
Overweight (50-100 kg)	16	22
Obesity (>100 kg)	3	4
Hypothyroidism	3	4

It was noted that the age group of patients with postmenopausal bleeding was between 45 and 50 years in 14% of women, 50 to 60 years in 56% of the women and above the age of 60 years in 30% of women. Among the postmenopausal women with bleeding, 11% were nulliparous, 23% had two parity and 66 % of women had parity more than 2.

Table 2: Histopathological findings.

Histopathological findings	No. of patients	Percentage
Benign	53	70
Proliferative	17	22
Atrophic	10	13
Cystoglandular hyperplasia	7	10
Endometrial hyperplasia	7	9
Endometritis	5	7
Fibroids	4	5
Endometrial polyp	3	4
Malignant	22	30
Cervical carcinoma	13	18
Well differentiated squamous cell carcinoma	12	16
Moderately differentiated squamous cell carcinoma	1	2
Endometrial carcinoma	9	12
Well differentiated endometrioid type	5	7
Moderately differentiated	2	3
Villoglandular type	1	1
Poorly differentiated	1	1

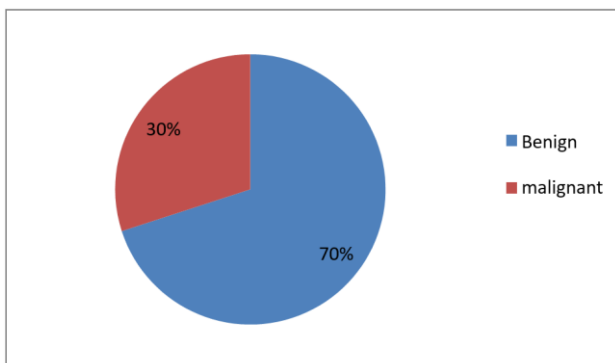


Figure 1: Histopathological findings.

Hypertension (20%), diabetes mellitus (11%), overweight 50-100 kg (22%), obesity more than 100 kg (4%) and hypothyroidism (4%) were the common medical disorders associated with postmenopausal bleeding in the study.

In the present study, 70% of women had benign lesions (53) and 30% women had malignant lesions (22). Endometrial typing revealed the benign conditions like

proliferative type (22%), atrophic type (13%), cystoglandular hyperplasia (10%), endometrial hyperplasia (9%), enometritis (7%), fibroids (5%), and endometrial polyp (4%). The cancerous findings of well differentiated endometroid carcinoma (12%) and cervical carcinoma (18%) were noted. Endometrial carcinoma was well differentiated endometroid type in 7%, moderately differentiated in 3%, villoglandular type in 1% and poorly differentiated in 1% of women. Cervical cancer was well differentiated squamous cell carcinoma in 16% and moderately differentiated in 2% of women.

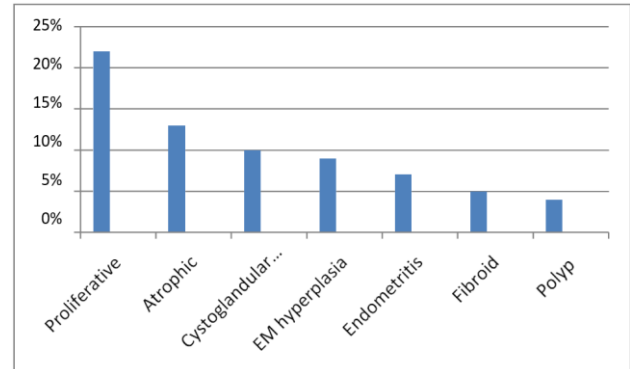


Figure 2: Distribution of benign lesions in postmenopausal bleeding.

DISCUSSION

Postmenopausal bleeding is a sinister complaint of postmenopausal women. It is commonly observed 5 to 10 years after attainment of menopause and the common age of presentation is 50 to 60 years. Aetiology of postmenopausal bleeding includes benign causes like proliferative or atrophic endometrium, endometrial or cervical polyp, endometrial hyperplasia which may be simple or complex with or without atypia, senile endometritis and atrophic vaginitis.

Malignant causes of postmenopausal bleeding include cervical cancer, endometrial carcinoma, uterine sarcoma, estrogen secreting ovarian tumours, vulval and vaginal carcinomas. Rare causes are chronic endometritis of tuberculous origin, thrombocytopenia, leukaemia, use of anticoagulants and secondary coagulopathy due to liver disease. Even though the major causes of bleeding are of benign origin, it's mandatory to thoroughly evaluate and exclude atypical hyperplasia and carcinoma. The risk factors like early marriage, multiparity, multiple sexual partners culminate for development of cervical cancer. Advanced age, obesity, early menarche, late menopause diabetes, hypertension, polycystic ovaries all predispose to endometrial cancer. Detailed history eliciting forms the foremost important step towards diagnosis and thorough clinical evaluation guide us through the diagnosis. Abdominal and transvaginal ultrasound remain the mainstay of non-invasive investigation reflecting and modifying the diagnosis.⁷ Transvaginal sonography

showing endometrial thickness >4 mm yields 98% sensitivity for detection of cancer.

Endometrial sampling and biopsy done by conventional fractional curettage or office sampling using pipelles are mandatory procedures to be done on patients with postmenopausal bleeding. Hysteroscopic guided biopsy may be performed wherever available as it has more diagnostic value to the final diagnosis.⁸ Simultaneously, it enables therapeutic removal of polyps, small submucous myomas in the same sitting in a single step. The office vaginoscopic hysteroscopy is replacing the traditional ones as it no longer requires vaginal speculum, tenaculum, cervical dilatation and sedation.⁹ It does not require hospitalisation, antibiotics and are more diagnostic enabling simultaneous endometrial biopsy for histopathology.¹⁰ Though genital malignancies attribute to 10% of postmenopausal bleeding, high degree of suspicion is to be raised as early diagnosis and management of cancers have high cure and survival rate.¹¹ A community based cross sectional study conducted by Aswathy et al in rural Kerala and a hospital based study by Kumar in Mangalore reported a low screening rate of 6.9% and 7.2% respectively.^{12,13} 84% of the patients had menopause above 45 years and bleeding was noted maximum in the 50–60 years age group. Bleeding was noted commonly from 2-17 years after menopause and majority presented within 5 years from menopause and this correlates with the studies done by Nirupama et al.¹⁴ Endometrial cancers was the leading cause of postmenopausal bleeding as noted in a study by Rathi et al.¹⁵ Carcinoma cervix is the most common cause of postmenopausal bleeding as comparable to many Indian studies. A study done at a tertiary care centre in United states on postmenopausal women with bleeding had a final report of 6.6% of cancer cervix, atypical hyperplasia in 0.2%, hyperplasia without atypia in 2%, polyps in 37.7%, fibroid in 6.2%, proliferative/ secretory type of endometrium in 14.5% and hypertrophy/ atrophy pattern in 30.8 % of cases.¹⁶ The complex atypical hyperplasia has 25-30% incidence of progression to invasive carcinoma while simple hyperplasia has 1% incidence of progression.

In general, the basic picture of postmenopausal endometrium is atrophic.¹⁷ High circulating estrogens in the body is a precursor of endometrial hyperplasia and 32% of the women in our study had functional endometrium which is a cause of concern. Pragati et al observed a similar finding of 32.5% of functional endometrium in his study for which the women required long term follow up.¹⁸

Endometrial hyperplasia was found in 5 to 10% of cases of postmenopausal bleeding mainly due to hyperestrogenism due to either obesity, exogenous estrogens or estrogen secreting ovarian tumour. Clinically significant hyperplasia evolves with a background of functional endometrium due to protracted exposure to

estrogens in the absence of progesterone, an established factor for endometrial cancer.

CONCLUSION

Benign lesions are the commonest causes of postmenopausal bleeding in postmenopausal women. However strong suspicion of cancer cervix and endometrium should arise in the evaluating and treating minds so as to effect treatment at the earliest. The patients with postmenopausal bleeding should be kept in long term follow up as well. Early detection and treatment of hyperplasia, cancer cervix and endometrium in early stages have a very good cure rate, increase the survival rate and clearly reduces the mortality and morbidity of women.

ACKNOWLEDGMENTS

I acknowledge and thank all the women enrolled in the study for their fullest cooperation. I thank all the workers and staff involved in mobilizing the resources needed for the study. I thank my post graduates who have extended their hand for the conduct of the study and to follow up the patients and their reports. I finally thank the pathology department people for extending their help in processing the histopathology of all the sent samples.

Funding: No funding sources

Conflict of interest: None declared

Ethical approval: The study was approved by the Institutional Ethics Committee

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Cite this article as: Lavanya S, Munivenkatappa S, Sravanthi AJ. A two-year study on postmenopausal bleeding at a tertiary institute. *Int J Reprod Contracept Obstet Gynecol* 2021;10:479-83.