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Original Research Article

Study of histopathological findings and clinical presentation in post-menopausal bleeding

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ABSTRACT

Background: Aim of the research was to study the clinical significance of post-menopausal bleeding in terms of its risk factors, malignancy incidence, and histopathological evaluation for the cause of the post-menopausal bleed.
Methods: This prospective observational study was conducted in the department of gynecological in Kanyakumari Government Medical College in 100 post-menopausal bleeding per vaginam. Evaluated by history, clinical examination, and investigations like transvaginal sonography, endometrial biopsy, and cervical biopsy for all subjects, the specimens collected will be sent to the pathology dept for examination and reporting. A total of 17% of patients were observed with an enlarged uterus and 42% scanty uterine curettings.
Results: The maximum number of patients, 29%, were reported in the age group of 50 to 55 years with an average age of 54.27 years. Para 2 parity (49%) and body mass index (BMI) value 21 to 30 (60%) were reported maximum in all subjects. Hypertension (17%) was reported as a major risk factor for endometrial carcinoma. Most of the patients were found with simple hyperplasia without atypia 34 (34%), followed by atrophic endometritis 32 (32%), and minimum patients have observed complex hyperplasia with atypia 4 (4%).
Conclusions: The symptom indicating endometrial pathology in post-menopausal women is uterine bleeding. The incidence of a malignant cause of post-menopausal bleeding increases as the time lapse between menopause and the onset of bleeding increases. Atrophic endometritis (atrophic vaginitis) was found to be a major cause of post-menopausal bleeding. Post-menopausal hyperplasia carries a more serious threat of cancer than does premenopausal hyperplasia.

Keywords: Post-menopausal, Histopathological, Bleeding, Malignancy, Clinical significance

INTRODUCTION

Post-menopausal bleeding (PMB) is one of the most often referred conditions to gynaecological services, owing to the possibility of an underlying endometrial cancer.[1] A woman who does not take hormone replacement treatment (HRT) who bleeds after menopause has a 10% chance of developing genital cancer and an additional 10% chance of developing severe pathology.[2] As a result, any post-menopausal bleeding should be checked, no matter how little or infrequent. Nongenital, genital, uterine, and extrauterine causes are all possibilities. Traumatic bleeding from an atrophic vagina might account for up to 15% of all post-menopausal bleeding causes.[3] Endometrial atrophy is the most prevalent endometrial abnormality in women experiencing post-menopausal bleeding, accounting for 60–80% of cases. Polyps that go unnoticed and untreated might cause recurring or continuous bleeding, resulting in a needless hysterectomy.[4,5]

Endometrial hyperplasia develops in 5–10% of individuals with post-menopausal uterine haemorrhage. Endometrial

hyperplasia and cancer are known to be linked to oestrogen.[6] Obesity, exogenous oestrogen, or an oestrogenic-secreting ovarian tumour are potential sources of excess oestrogen.[7] Because of prolonged oestrogen stimulation in the absence of progesterone impact, clinically substantial hyperplasia generally develops against a backdrop of proliferative endometrium.[8] Endometrial hyperplasia is essential not just because it may cause irregular uterine bleeding, but it can also happen before or simultaneously as endometrial cancer.[9] The most frequent presenting symptom in women diagnosed with endometrial cancer in post-menopausal bleeding.[10]

The benign circumstances will be isolated with proper PMB assessment. Early identification and treatment of malignant lesions and treatment of benign disorders with reassurance can allow a post-menopausal woman to live a healthy life.

Hence the present study was carried out to study the clinical significance of post-menopausal bleeding in terms of its risk factors, the incidence of malignancy and histopathological evaluation for the cause of the post-menopausal bleed.

METHODS

This prospective observational study was conducted in the department of obstetrics and gynaecology in Kanyakumari Government Medical College in 100 post-menopausal bleeding per vaginam from January 2021 to December 2021.

A total of 100 cases who presented clinically with PMB varying from spotting per vaginum, scanty flow, moderate to profuse bleeding were included.

Inclusion criteria

All women aged over 45 years with post-menopausal bleeding and had last menstrual period at least 1 year back were included.

Exclusion criteria

Women with surgical induced, premature, radiation-induced, chemotherapy-induced menopause and women on hormone replacement therapy were excluded from the study.

Procedure

Women with post-menopausal bleeding attending the outpatient department (OPD) or admitted for evaluation in this prospective study. Written and informed consent from all the patients enrolled in the study. Evaluated by history, clinical examination, and investigations like transvaginal sonography, endometrial biopsy, and cervical biopsy for all subjects, the specimens collected will be sent to the pathology department for examination and reporting.

Ethical committee

Permission from the institutional ethical committee was taken along with written consent from all volunteers before starting the study. Data were presented as mean, frequency and percentages.

RESULTS

In the present study, 100 women were enrolled, and their age distribution was recorded. The maximum participants, 38 (38%), were observed in the age group of 55 to 60 years, followed by the age group of 50 to 55 years with 29 (29%) participants (Table 1). The mean age of participants was reported to be 54.27 years.

Table 1: Age distribution of all participants.

Age in years	No. of cases
50-55	29
55-60	38
60-65	24
>65	9
Total	100
Mean age	53.27

The participants were studied based on the parity, it was observed that most of the subjects were para 2 parity 49 (49%), followed by para 3 parity 25 (25%), and minimum subjects were observed in null para parity (Table 2).

Table 2: Distribution of patients based on parity.

Parity	No. of cases
Nulli para	5
Para 1	8
Para 2	49
Para 3	25
Para >4	13
Total	100

In the present study, the majority, 60 (60%), of the malignancy was observed in patients with BMI less than 30, followed by 28 (28%) women with BMI less than 40. Whereas no patients were observed with blood clots or no viable tissue in the present study (Table 4).

Table 4: Relationship of BMI of post-menopausal bleeding women with histopathology.

Observed cases	BMI		
	21-30	**31-35**	**36-40**
Percent	60	28	12
	60%	28%	12%

The risk factors associated with endometrial cancer were studied in all patients. Hypertension was observed in maximum patients 17, followed by obesity in 11 patients, and least patients were observed in null gravid 4 (Table 5).

Table 5: Risk factors associated with endometrial carcinoma.

Risk factors associated with endometrial carcinoma	No. of cases
Hypertension	17
Diabetes mellitus	8
Nulli gravida	4
Obesity	11
Hypothyroidism	5

Present evaluated the size of uterine size among all subjects. The majority of the subjects were observed with normal uterine size 60 (60%), whereas 17 (17%) patients were reported with enlarged and 23 (23%) patients with an atrophic uterus were found (Table 6).

Table 6: Observation of uterine size of all subjects.

Uterine size	No. of cases
Atrophic	23
Enlarged uterus	17
Normal uterus	60
Total	100

The type of uterine curettings was studied in all subjects; maximum cases observed were scanty 42 (42%) after that moderate with 32 (32%) patients (Table 7).

Table 7: Observation of types of uterine curettings in all subjects.

Type of uterine curettings	No. of cases
Copius fleshy	26
Moderate	32
Scanty	42
Total	100

Table 8: Endometrial histopathology in relation to post-menopausal bleeding.

Histopathological examination	No. of cases
Atrophic vaginitis	32
Simple hyperplasia without atypia	34
Simple hyperplasia with atypia	14
Complex hyperplasia without atypia	8
Complex hyperplasia with atypia	4
Adenocarcinoma	8
Total	100

In the present study, histopathological evaluation was correlated with post-menopausal bleeding, most of the patients were found with simple hyperplasia without atypia 34 (34%), followed by atrophic endometritis 32 (32%), and minimum patients have observed complex hyperplasia with atypia 4 (4%) (Table 8).

DISCUSSION

Post-menopausal bleeding is an alarming sign with a high possibility of association with cervical or uterine malignancy. It is one of the commonest symptoms the patient presents with, and hence should be worked upon priority bases to detect abnormalities if any present.[1,2]

The total number of cases studied was 100, where in the age group of 51 to 55 years had the highest prevalence and the least was noted between the ages of 60. The study conducted by Wong et al reported the highest patients in the age group of 38-94.[11] However, Bharani et al observed most patients in the age group of 52 to 65 years, which is similar to our study.[12] The mean age of the patient in the study we conducted was 54.27 years, whereas it was much lower in the study conducted in the western population.

Further observed that most subjects were para 2 parity 49 (49%), followed by para 3 parity 25 (25%), and minimum subjects were observed in null para parity. Other studies also reported similar findings.[13]

In the present study, maximum patients were observed in patients with BMI 21 to 30, followed by BMI of 31 to 35 and minimum malignancy observed in patients with BMI 36 to 40. These findings in our study are in accordance with earlier studies.[3]

Hypertension was reported as the main risk factor for endometrial cancer (17%) in the present study, followed by obesity (11%) and diabetes mellitus (8%). Most patients were observed with the normal uterus, whereas an enlarged uterus was reported in 17% of subjects. The scanty uterine currenting (42%) was also highest among subjects. These findings in the present study are similar to earlier reported studies.[14]

The incidences of hyperplasia were found to be 33% (including simplex and complex) of all hyperplasia observed highest incidences were reported with simple hyperplasia without atypia, 63.63% and the minimum incidences were for simple hyperplasia with atypia 3 (9.09%).

In the present study histopathological evaluation in relation to post-menopausal bleeding, the majority of the patients were reported with simple hyperplasia without atypia (32%), followed by atrophic endometrium (29%) and minimum patients were observed complex hyperplasia with atypia (4%). On the other hand, the studies by Escoffery et al showed a 22% incidence of hyperplasia, which is slightly lower than the present study.[15] The higher incidence of endometrial hyperplasia shows that the post-menopausal endometrium in cases of bleeding exhibits an estrogenic effect of varying degrees.

Atrophic endometrium as the cause of post-menopausal bleeding in the present study was 29%. This was comparable with Pacheco et al who reported 27.7% atrophic endometrium.[16] Gredmark et al showed a higher percentage in their series with an incidence of 51.5% atrophic endometrium.[17] It is not known why some patients tend to bleed from atrophic endometrium. Anatomical vascular variations or local abnormal haemostatic mechanisms in the uterus have been proposed.

In our study, endometrial adenocarcinoma accounted for 7% of cases this is comparable with Gredmark et al, 8.4%. However, Pacheco et al had higher incidence of endometrial carcinoma 21.8%.[16,17]

Limitations

Small sample size, multiple comparisons without corrections, observational design and risk for confounding were certain limitations.

CONCLUSION

The only symptom suggesting an endometrial pathology in post-menopausal women is uterine bleeding. Hence, each post-menopausal bleeding requires to be investigated with suspicions. The incidence of a malignant cause of post-menopausal bleeding increases as the time lapse between menopause and the onset of bleeding increases.

Atrophic endometritis (atrophic vaginitis) was a significant cause of post-menopausal bleeding. Post-menopausal hyperplasia carries a stronger threat of cancer than does premenopausal hyperplasia. The atrophic endometrium also played a significant role in PMB in the present study. Therefore the study of endometrial histomorphology in PMB will help appropriate therapeutic management. Among the malignant causes, adenocarcinoma of endometrioid type was most frequent with a lower mean age at presentation.

Although the incidence of post-menopausal bleeding due to malignancy has fallen, it remains sufficiently high to require immediate and thorough investigation.

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