



Clinopathological Evaluation of Postmenopausal Bleeding: A Study of 50 Women

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ABSTRACT: Introduction

Postmenopausal bleeding is a common clinical problem in both general and hospital settings accounting for as high as 10 % of the general gynaecological patients attending the OPD globally. This is an alarming condition because globally almost 10 % to 15 % of women with postmenopausal bleeding have endometrial carcinoma.

Materials and Methods:

This is an observational study of 50 women with postmenopausal bleeding who were evaluated at our centre on the basis of their age, comorbidities, high risk parameters for genital tract malignancies, cause of postmenopausal bleeding, ultrasound examination findings and histopathological findings of the endometrium obtained by dilation and curettage (D & C).

Results

In the present study, 24 % of the patients had atrophic endometritis, 6 % had carcinoma of the endometrium, 6 % had carcinoma of the cervix and 40 % had endometrial hyperplasia. Of the 20 patients who had endometrial hyperplasia, 1 had oestrogen secreting granulosa tumour, 2 patients were on SERM Therapy and 3 patients were on oestrogen therapy.

Conclusion

It is extremely important to evaluate each and every patient of postmenopausal bleeding in view of the high probability of carcinoma of the endometrium or carcinoma of the cervix in such patients.

KEYWORDS: Postmenopausal bleeding, PMB, carcinoma of the endometrium, carcinoma of the cervix, menopause, endometrial hyperplasia.

I. INTRODUCTION

The World Health Organisation has defined "**menopause**" as the permanent cessation of menstruation resulting from loss of ovarian follicular activity and has defined "**postmenopausal bleeding**" as bleeding from the genital tract of a menopausal woman more than 12

months after her last menstrual period. Postmenopausal bleeding is a common clinical problem in both general and hospital settings accounting for as high as 10 % of the general gynaecological patients attending the OPD globally. This is an alarming condition because globally almost 10 % to 15 % of women with postmenopausal bleeding have endometrial carcinoma. In addition, postmenopausal bleeding can also be caused due to other conditions such as cervical or vaginal malignancy, oestrogen secreting ovarian tumours, endometrial or vaginal atrophy, endometrial hyperplasia, cervical erosions, endometrial polyps, decubitus ulcerations in patients with uterovaginal prolapse and patients medication (oestrogen or SERM Therapy). According to the WHO, in the year 2021, the life expectancy of women is anticipated to be 73 years and postmenopausal women will constitute almost 1/3 of the female population. Therefore guidelines addressing the evaluation of postmenopausal bleeding are aimed at excluding endometrial cancer, cervical cancer and precancerous lesions of the cervix and endometrium.

II. MATERIAL AND METHODS

This is an observational study of 50 women with postmenopausal bleeding who were evaluated at our centre on the basis of their age, comorbidities, high risk parameters for genital tract malignancies, cause of postmenopausal bleeding, ultrasound examination findings and histopathological findings of the endometrium obtained by dilation and curettage (D & C).

Inclusion criteria:

1. Patients above 40 years of age with postmenopausal bleeding as per WHO definition who had attained natural menopause

Exclusion criteria:

1. Premature ovarian failure or premature menopause
2. Surgical menopause



3. Menopause secondary to radiotherapy or chemotherapy
 4. Amenorrhoea due to pituitary disorders

III. RESULTS

i. Age wise distribution of patients:

| AGE GROUP | NUMBER OF PATIENTS |
|----------------------------|--------------------|
| 40 to 44 years | 1 (20 %) |
| 45 to 49 years | 2 (28 %) |
| 50 to 54 years | 4 (22 %) |
| 55 to 59 years | 7 (26 %) |
| 60 to 64 years | 3 (04 %) |
| 65 to 69 years | 16 (%) |
| 70 to 74 years | 14 (%) |
| 75 to 79 years | 2 (%) |
| 80 years and above | 1 (%) |
| TOTAL = 50 PATIENTS | |

Most of the patients (60 %) were in the age group of 65 years to 74 years of age. The oldest patient was 82 years of age.

ii. Distribution of patients according to high risk parameters for genital tract malignancy and comorbidities:

Out of 100 patients in our study, following is the chart showing the kind of menstrual abnormalities and resultant improvement post treatment:

| PARAMETER / COMORBIDITY | NO. OF PATIENTS |
|--------------------------|-----------------|
| DIABETES MELLITUS | 12 |
| HYPERTENSION | 8 |
| OBESITY | 17 |
| DYSLIPIDAEMIA | 5 |
| MULTIPLE SEXUAL PARTNERS | 3 |
| OESTROGEN THERAPY | 3 |
| SERM THERAPY: | 2 |
| • Tibolone | 1 |
| • Tamoxifen | 1 |
| NONE | 10 |

iii. Findings of ultrasound examination:

| PARAMETER | NO. OF PATIENTS |
|-------------------------------|-----------------|
| ENDOMETRIAL THICKNESS: | |
| • < 5 mm | 16 |
| • 5 mm to 10 mm | 16 |
| • > 9 mm | 18 |
| ADNEXAL MASSES | 1 |
| CERVICAL MASSES | 2 |

The maximum endometrial thickness recorded in our study was 22 mm. The patient who had an adnexal mass had an endometrial thickness

18 mm and the adnexal mass was a granulosa cell tumour. One of the 3 patients with a cervical mass also showed pyometra on ultrasound examination.



iv. **Histopathological findings of the endometrium:**

| PARAMETER | NO. OF PATIENTS |
|---------------------------------------|-----------------|
| ATROPHIC ENDOMETRIUM | 12 |
| PROLIFERATIVE ENDOMETRIUM | 8 |
| SECRETORY ENDOMETRIUM | 4 |
| DISORDERED ENDOMETRIUM | 2 |
| SIMPLE ENDOMETRIAL HYPERPLASIA | 6 |
| COMPLEX ENDOMETRIAL HYPERPLASIA: | 8 |
| • Without atypia | 5 |
| • With atypia | 3 |
| SQUAMOUS CELL CARCINOMA OF THE CERVIX | 3 |
| ADENOMACARCINOMA OF THE ENDOMETRIUM | 3 |
| ADENOACANTHOMA OF THE ENDOMETRIUM | 1 |
| NO ENDOMETRIUM OBTAINED | 3 |
| TOTAL = 50 PATIENTS | |

In 1 of the patients where no endometrium was obtained, she was found to have adenocarcinoma of the vagina associated with a forgotten polyurethane pessary in the vagina.

v. **CAUSE OF POST MENOPAUSAL BLEEDING:**

| CAUSE OF POSTMENOPAUSAL BLEEDING | NO. OF PATIENTS |
|---|-----------------|
| ATROPHIC ENDOMETRITIS | 12 |
| ENDOMETRIAL HYPERPLASIA: | 20 |
| • Granulosa Cell Tumour | 1 |
| • SERM Therapy | 2 |
| • Oestrogen Therapy | 3 |
| ADENOCARCINOMA OF THE ENDOMETRIUM | 3 |
| ADENOACANTHOMA OF THE ENDOMETRIUM | 1 |
| CARCINOMA OF THE CERVIX | 3 |
| VAGINAL ADENOCARCINOMA FOLLOWING A FORGOTTEN POLYURETHANE PESSARY IN THE VAGINA | 1 |
| CERVICAL EROSION | 3 |
| DECUBITUS ULCER IN UTERINE PROCIDENTIA | 2 |
| ATROPHIC VAGINITIS | 5 |
| TOTAL = 50 PATIENTS | |

IV. DISCUSSION

The following chart is a comparative chart of the age distribution of patients in the present study as compared to the study of Shreelata et al^[1]:

| AGE GROUP | PRESENT STUDY | SHREELATA ET ALL ^[1] |
|----------------|---------------|---------------------------------|
| 40 TO 44 YEARS | 2 % | 8 % |
| 45 TO 49 YEARS | 4 % | 22 % |
| 50 TO 54 YEARS | 8 % | 42 % |
| 54 TO 59 YEARS | 14 % | 14 % |



In the present study, 24 % of the women were diabetic, 16 % were hypertensive and 34 % were obese as compared to 36 % of the women being diabetic, 25 % being hypertensive and 14 % being obese in the study of Shahnaz Rehman et al [3].

In the present study, 32 % of the patients had endometrial thickness < 4mm on ultrasound examination, 32 % of the patients had endometrial thickness between 5 mm and 9mm on ultrasound examination and 36 % of the patients had endometrial thickness > 10 mm as compared to the

findings in the study of Shahnaz Rehman et al [3] where 57.7 % of the patients had endometrial thickness of < 4 mm, 37.7 % of the patients had endometrial thickness between 5 mm and 9mm and 5.6 % of the patients had endometrial thickness > 10 mm.

The following chart is a self explanatory chart showing the comparison of the histopathological findings in the present study, the study of Shreelata et al [1] and the study of Jasmine Begum et al [2].

| HISTOPATHOLOGICAL FINDINGS | PRESENT STUDY | SHREELATA ET AL [1] | JASMINE BEGUM ET AL [2] |
|---------------------------------------|---------------|---------------------|-------------------------|
| ATROPHIC ENDOMETRIUM | 24 % | 14 % | 30.3 % |
| PROLIFERATIVE ENDOMETRIUM | 16 % | 16 % | 27.6 % |
| SECRETORY ENDOMETRIUM | 8 % | 10 % | 0 % |
| DISORDERED ENDOMETRIUM | 4 % | 0 % | 9.2 % |
| SIMPLE ENDOMETRIAL HYPERPLASIA | 12 % | 5 % | 5.3 % |
| COMPLEX ENDOMETRIAL HYPERPLASIA | 16 % | 8 % | 3.9 % |
| SQUAMOUS CELL CARCINOMA OF THE CERVIX | 6 % | 10 % | - |
| ADENOCARCINOMA OF THE ENDOMETRIUM | 6 % | 4 % | 10 % |
| ADENOACANTHOMA OF THE ENDOMETRIUM | 2 % | 0 % | 0 % |
| NO ENDOMETRIUM OBTAINED | 6 % | 6 % | 6 % |

6 % of the patients in the present study were diagnosed to have carcinoma of the endometrium, 6 % were diagnosed to have carcinoma of the cervix and 4 % of the patients had postmenopausal bleeding due to decubitus ulcer in procidentia of the uterus as compared to the findings of the study of Luiz Cavalcanti de Albuquerque Neto et al [4] who reported 29.6 % of the cases as carcinoma of the endometrium, 59.2 % of the cases as carcinoma of the cervix and 19.4 % of the cases as having postmenopausal bleeding due to decubitus ulcer due to procidentia of the uterus.

V. CONCLUSION

Postmenopausal bleeding is a common problem with gynaecological malignancies such as endometrial carcinoma and carcinoma of cervix being an important part of the diagnosis. Occasionally, oestrogen secreting ovarian tumours such as granulosa cell tumours may cause postmenopausal bleeding due to endometrial hyperplasia. Several of the cases of

postmenopausal bleeding may be due to atrophic endometritis, atrophic vaginitis or even due to the use of oestrogen therapy or selective oestrogen receptor modulator therapy such as tibolone for severe osteoarthritis or tamoxifen for carcinoma of the breast. However, all cases of postmenopausal bleeding need to be thoroughly evaluated by clinical examination, ultrasound examination, Pap Smear and endometrial histopathology in view of the high probabilities of gynaecological malignancies in these patients.

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