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Postmenopausal bleeding and its evaluation: Prospective study in a tertiary care center

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Abstract
Objective: To study the prevalence of postmenopausal women in the urban population, its clinical presentation, histopathology incidence of malignancy.
Method and material: A prospective study performed in ESIC medical college, Bangalore, over 50 women. When women presented to the outpatient with complain of postmenopausal bleed there was enrolled in the study. Patient's demographic data were collected, the pap and endometrial HPE were studied.
Results: The average age of menopause was 50 years. The histopathological analysis showed proliferative endometrium (16%), secretory endometrium (10%), atrophic endometrium (14%), simple hyperplasia (10%), complex hyperplasia with atypia (8%), endometrial polyp (4%) and cervical polyp in (4%). Squamous cell cervical carcinoma (10%) endocervicitis (14%) of the population and endometrial malignancy in (4%) no opinion were given in (6%).
Conclusion: Postmenopausal bleeding is a sinister complaint among the elderly women. It needs a complete history, clinical examination and investigations to detect the cases of malignancy at a earlier date. High-risk women like nulligravida, obesity, diabetes, has to be considered as special case and extensively investigated to rule out malignancy.

Keywords: Post-menopausal bleeding, endometrial thickness, endometrial carcinoma, cervical carcinoma, histopathology

Introduction

World Health Organization (WHO) defines menopause as cessation of menstruation permanently for a period of more than one year, which is resulted from loss of ovarian activity [1] Postmenopausal bleeding (PMB) is defined as bleeding from the genital tract, more than 12 months after the last menstrual period in a woman not on hormone replacement (HRT) [2] In our country a larger population, i.e 71 million people are over 60 years of age. And postmenopausal women constituting to 43 million, according to the third consensus meeting of Indian Menopause Society (2008). Bleeding per vagina postmenopausally is one of the most common reason for referral to gynecological department, with a strong suspicion of malignancy various studies have proven that 90% of the postmenopausal bleed is due to endometrial carcinoma [(4)], whereas only 10-15% of the women on HRT and having bleed per vagina is diagnosed as endometrial carcinoma. Endometrial cancer is the most common gynecological malignancy in the West, but in India, the incidence rates are low. 80 – 90% of the women have benign conditions like endometrial or cervical polyps, endometrial atrophy, infection,simple endometrial hyperplasia, medical disorders (e.g., liver cirrhosis), decubitus ulcer in cases of uterovaginal prolapse, neglected pessary and forgotten intra uterine device [5]. Serious conditions like endometrial cancer must be ruled out first. Women with risk factors liken nulligravida, women with multiple sexual partner, obese, diabetic, taking exogenous estrogens/ tamoxifen, women who attain menopause late must be extensively investigated [6]. As the first line of investigation Transvaginal ultrasonography (TVS) is the recommended to assess the endometrial pathology, when the endometrial thickness is found to be more than 4 mm, it yields 98% sensitivity to detect endometrial cancer and pap smear for cervical pathology [7]. In suspected cases Dilatation and curettage or hysteroscopic guided biopsy are found to be the best modality to diagnose the aetiology for the bleed.

Postmenopausal bleed until proved otherwise should be considered abnormal, except in those taking HRT [7]. Post-menopausal bleed is the most common symptom of endometrial carcinoma, hence every postmenopausal bleed should be investigated to rule out this first [8].

This study was conducted to study the clinical significance of postmenopausal bleeding in term of its risk factors, incidence of malignancy and histopathological evaluation for the cause of postmenopausal bleed.

Material and methods

This descriptive study was carried out on 50 patients at Obstetrics and Gynaecology department of ESIC medical college during 2017. Postmenopausal women who presented clinically with complaint of vaginal bleeding, with their last menstrual period at least one year back and who were 45 years old or above were considered eligible for participation after taking informed consent. Patients having pre-mature menopause, surgical induced menopause, radiation induced menopause and chemotherapy induced menopause were excluded from the study. Detailed history was obtained from the patients including name, age, marital status, parity and postal address.

Details regarding vaginal bleeding were recorded. These included the timing of onset, duration and amount of bleeding. History of associated symptoms including presence of vaginal discharge, abdominal mass or pain and history of recent weight loss was obtained. Drug history especially, that of anticoagulants, hormones replacement therapy and tamoxifen therapy was also noted. Past medical and surgical history was checked especially regarding hypertension, diabetes mellitus and liver diseases.

A thorough general physical examination was performed. Height and weight of the cases measured and body mass index (BMI) calculated. Blood pressure was recorded. Specific clinical examination including abdominal, speculum and bimanual pelvic examinations were performed to assess the cervix and to determine size, position and mobility of the uterus. Cervical smears were taken. Transabdominal scan was done to assess endometrial thickness.

All base line investigations including Full blood count, Random blood sugar, Urine routine examination, Coagulation profile, X-ray chest and ECG were requested.

Opinion regarding fitness for anesthesia was obtained from the anesthetist. After taking written informed consent Examination under anesthesia (EUA), cervical smear and dilatation and curettage (D &C) were performed. Endometrial polyps, if found were avulsed. The specimens were collected in separate containers and sent for histopathological examination to pathology department. The data was entered into SPSS version 10 and results were obtained.

Results

The mean age of women with postmenopausal bleeding (PMB) was 51.4 years. Age distribution of women with postmenopausal bleeding is shown in Table 1. The parity distribution among study patients are shown in Table 1. The majority of the patients (44%) had parity of P2.

Table 1: Demographic data of the study subjects

Age (Years)	Number (50)
40-44	4 (8%)
45-49	11 (22%)
50-54	21 (42%)
54-60	14 (28%)

Table 2: Parity

Parity	Number (50)
Para 1	3
Para 2	22
Para 3	15
Para 4	6
Para 5 And More	4

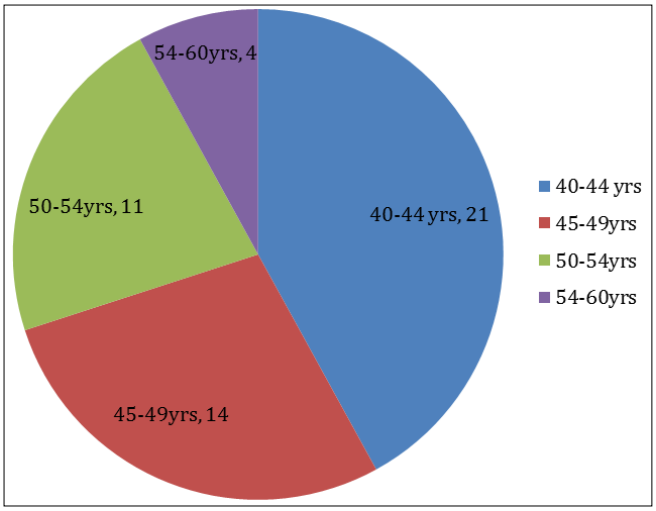

Fig 1: Demographic data of study subjects.

The histopathological findings of endometrium in patients with postmenopausal bleeding are shown in Table 3. Postmenopausal bleeding is more likely to be caused by pathologic disease than is bleeding in younger women. In the present series, 7 patients (14%) had malignancy, including endometrial.

carcinoma 4% and cervical carcinoma 10%, 27 patients (54%) had benign pathology,9 had hyperplasia(18%)and 7 patients (14%) had endometrial atrophy.

Table 3: Distribution according to histopathological findings

Histopathology findings	Number (50)
Proliferative endometrium	8(16%)
Atrophic endometrium	7(14%)
Secretory endometrium	5(10%)
Complex hyperplasia with atypia	4(8%)
Squamous cell carcinoma of cervix	5(10%)
Simple hyperplasia of endometrium	5(10%)
Endometrial carcinoma	2(4%)
Endocervicitis	7(14%)
Endometrial polyp	2(4%)
Cervical polyp	2(4%)
No opinion	3(6%)

Discussion

Postmenopausal bleeding is a alarming sign that has a high possible of association with the cervical or uterine malignancy. It is one of the commonest symptom the patient presents with, and hence should be worked up on priority bases to detect abnormalities if any present. the total number of cases we studied were 50, were in the age group of 40 to44 years had the highest prevalence and the least was noted between the age greater than 70, whereas the study conducted by Wong SF *et al*, Sousa R *et al*, Bharani B *et al*, and Sheikh M *et al* it varied to 38-94, 43-82, 52-65, 42-84 years respectively [9, 10, 11, 12]. The mean age of the patient in the study we conducted was 51.4 years whereas it was much lower in the study conducted in the western population. The correlation between the association of

age and PMB was reported by Gredmark T *et al*, which was not found in our study [13].

Women when presented with post-menopausal study were enrolled in the study and the endometrial curettage and cervical biopsies were performed. Benign conditions were noted in 31(62%) of the cases which predominantly included atrophic endometrium, proliferative endometrium, secretory endometrium, benign endometrial polyp, Endocervicitis and simple cystic hyperplasia cases. Premalignant conditions like hyperplasia with atypia seen in 4 (8%). Malignancy was noted in 7 women, out of whom 2(4%) had endometrial and 5(10%) had cervial cancer. Gredmark T *et al*, Lee WH *et al* Dangal G *et al* and by Kaur M et reported atropic endomaterium in 49.9%, 52.1%, 64.4% and 53% repectively, which the commonest cause for the post-menopausal bleeding where as in our study the reported prevalance was only 7(14%) to be atrophy [13, 23, 14, 15]. Meyer *et al* postulated the reason for the post-menopausal bleed in senile endometrium to be sclerotic degeneration of endometrial vessels whereas Hourihan *et al* stated that the anatomical vascular variations or local abnormal haemostatic mechanisms in the uterus to be the cause.

Simple endometrial hyperplasia which is one of the most important predisposing factors for the development of endometrial cancer were tabulated as 10% in our study which ranged from 13.46% to 26.6% in various studies [17, 18].

The highest risk is noted in atypical endometrial hyperplasia which was observed in 8% of the study population, ranged from 1.8 – 8% in other studies [8, 10, 12].

Proliferative endometrium was observed in 16% in our study which is comparison to the study conducted by Phillip H *et al* found 20% [16].

Choo Y C *et al* well wrote that as a result of the conversion of adrenal and rostanedione by peripheral fatty tissue to estrogen which can lead to proliferative endometrium, which due to the fluctuating low level of estrogen can bleeds [20].

Endometrial adenocarcinoma which is the most threatened cause of postmenopausal bleeding, was found in 4% of the study population in our study, while various others found it to range from 6% to 12%, [11, 13, 19].

Squamous cell carcinoma of the cervix was responsible for 10% cases of PMB in our study making it almost double that of the endomaterial cancer, while it is reported to range from 8.8% to 39.6% in other studies [21].

The results support the fact that the diagnostic focus in post menopausal bleeding in our country, should also focus on excluding cervical pathology. 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 [22].

Conclusion

Postmenopausal bleeding should always be taken seriously and investigated meticulously no matter how minimal or insignificant it may appear. Early diagnosis makes successful treatment of endometrial hyperplasia and endometrial cancer in post-menopausal bleeding cases. Endometrial sampling is mandatory prior to therapeutic gesture. 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.

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