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Histopathological spectrum of lesions in evaluating the women with postmenopausal bleeding

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ABSTRACT

Background: Postmenopausal bleeding occurs in approximately 10% of postmenopausal women. Postmenopausal bleeding requires complete assessment to ensure the absence of malignancy.
Aims & Objective: The aim of the study is to know the causes of postmenopausal bleeding based on Histopathological findings and the percentages of various benign, pre malignant and malignant lesions.
Materials and Methods: This study included 53 cases attending the obstetrics & gynaecology department of TMU&RC, Moradabad western Uttar Pradesh with complaint of post menopausal bleeding over a time period of 2 years from July 2017-June 2019.
Results: Among benign cases, the most common cause was atrophic endometrium (39.6%). Among malignant cases, the most common cause was cervical malignancy (28.3%). Out of 53 cases, 26 cases account for premalignant and malignant causes of PMB, carcinoma cervix accounts for 53.7% and carcinoma in situ accounts for 3.8%.
Conclusion: The postmenopausal bleeding is an important symptom and require careful and timely assessment to eliminate the possibility of malignancy as soon as possible.

1. Introduction

Menopause is defined as the established cessation of menses succeeds by the loss of ovarian follicular activity.[1] Menopause is derived from Greek word, Men means 'Month' and Pausis means 'Cessation'. Conventionally menopause is not diagnosed until the individual has/ had 12 months of amenorrhea.[2] The median age was calculated to be between 50-52 years, based on cross section studies.[3]

PMB has been defined by WHO, as an episode of bleeding in 12 months or more after the last menses. In general population, the incidence of postmenopausal bleeding is approximately 10% immediately after menopause and 5% in all menopausal women.[4] Even without amenorrhea or irregularity, menstruation should be a subject of study and be investigated even after 55 years of age.[5] Although postmenopausal bleeding is often associated with benign pathology, the possibility of having an underline malignancy makes it a sinister complaint requiring thorough clinical workup. Evidence has shown that early detection of cervical and endometrial cancer improves the cure rate and reduces mortality.[6,7] However unfortunately, like the cervical cancer there are no effective screening tests available for early detection of endometrial cancer.[7] A classic study has categorized PMB as "Endometrial cancer until proven otherwise" which means that the PMB must always be investigated as this might be a symbol of endometrial carcinoma. Hence, the identification of postmenopausal bleeding in community settings provide an opportunity to detect these women at

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early stages of these cancers.

About 15% of cervical cancers are diagnosed in women over age 65. The 5-year survival rate for all women with cervical cancer is 66%. However, survival rates can vary by factors such as race, ethnicity, and age.[8] Studies had shown that the range of cervical cancer varies from 10- 81% in all malignant causes of PMB.[9] Since few studies describe the histological spectrum of lesions in entire genital tract hence this study was undertaken to examine the lesions in genital tract in cases of PMB.

2. Aims & Objectives

The aim of the study is to know the causes of postmenopausal bleeding based on Histopathological findings and the percentages of various benign, pre malignant and malignant lesions.

3. Materials and Methods

A prospective observational study conducted in the period July 2017-June 2019 at the Teerthanker Mahaveer Medical College and Research Centre, Moradabad, western UP, India, after approval by the Board of Studies and Ethical Committee in the Department of Obstetrics and Gynecology.

3.1. Inclusion criteria

All patients attending to gynaecological outpatient department with complaint of postmenopausal bleeding were taken in this study.

3.2. Exclusion criteria

1. Premature ovarian failure.
2. Patients on HRT.
3. Patients with obvious Decubitus ulcer with prolapsed uterus.

All cases of PMB undergone histopathological evaluation of endometrial carcinoma and cervical carcinoma. Samples were also taken from suspicious areas of vagina. The results were compiled, analysed and compaired to other studies.

4. Results

In our study, we included 53 women presenting to gynecology OPD of TMMC and RC, Moradabad, UP with complaint of postmenopausal bleeding. In my study incidence of postmenopausal bleeding is highest in age group of 46 – 50 years. Mean age being 55.85 years.

5. Discussion

PMB is a frequent and troubling symptom that can be associated with significant number of genital malignancy.

Table 1: Age distribution

Age groups	Total cases (n=53)	Percent
41-45 years	1	2%
46-50 years	19	36%
51-55 years	9	17%
56-60years	12	22%
Above 61 years	12	23%

Table 2: Distribution of Histopathological findings in PMB cases

Histopathology	Total cases (n=53)	Percent
Atrophic endometrium	21	39.6%
Endometrial hyperplasia	9	17.0%
Carcinoma endometrium	1	1.9%
Carcinoma in situ of cervix	1	1.9%
Endocervical adenocarcinoma	2	3.8%
Squamous cell carcinoma cervix	12	22.6%
Carcinoma vagina	1	1.9%
Endometritis	1	1.9%
Polyp	2	3.8%
Unremarkable	3	5.7%

Atrophic endometrium represents 39.6%.
Second most common cause is squamous cell carcinoma cervix accounting for 22.6%
Endometrial hyperplasia accounts for 17%

Table 3: HPE report on cervical biopsy

HPE	Total Cases(n=12)
Moderately differentiated squamous cell ca	7
Well differentiated squamous cell ca	2
Invasive papillary squamous cell ca	1
High grade squamous cell ca	1
Basaloid squamous cell ca	1

Considering the gravidity significant pathologies as a cause of PMB, patients with PMB should be prioritized for early detection and management. In present era life expectancy has increased and women tend to live longer and many experience the postmenopausal phase. Postmenopausal bleeding is a very alarming sign that may be associated with cervical and uterine malignancies.

PMB is an important symptom of cervical and endometrial cancer patients to report. In addition to disturbing the normal routine itself, PMB can also be associated with increased morbidity due to underlying gynaecological or systemic pathology.

Endometrial sampling is harmless, rapid and simple procedures done in clinical setting.[10]

In our study, the maximum cases were between 46-50 years (36%) followed by above 61 years (23%) and 56-

Table 4: Distribution of malignant & premalignant lesions from significant pathological cases of PMB

Type of malignancy	Cause of PMB		% among total cases (n=53)	% among premalignant & malignant cases (n=26)
Cervical malignancy	Cervical carcinoma (n=14)	Squamous cell carcinoma(n=12)	22.6%	46.15%
		Endocervical adenocarcinoma (n=2)	3.8%	7.7%
	Carcinoma in situ (n=1)		1.9%	3.8%
Endometrial malignancy	Endometrial carcinoma (n=1)		1.9%	3.8%
	Endometrial hyperplasia	Without atypia (n=7)	13.2%	27%
		With atypia (n=2)	3.8%	7.7%
Vaginal malignancy	Carcinoma vagina(n=1)		1.9%	3.8%

Out of 26 cases (49.1%) premalignant & malignant causes of PMB, cervical malignancy accounts for 57.65%. Among cervical malignancy, 53.7% are carcinoma cervix and carcinoma in situ of cervix accounts for 3.8%.
Endometrial malignancy was found in 38.5% cases among which carcinoma endometrium accounts for 3.8% and endometrial hyperplasia 34.7%
Carcinoma vagina accounts for 3.8% of all malignant causes of PMB.

Table 5: Correlation of age and Histopathological report

Histopathology	Age groups	
	41-50 years	>50 year
Atrophic endometrium (n=12)	6	15
	28.6%	71.4%
Carcinoma vagina (n=1)	0	1
	0.0%	100.0%
Endometrial hyperplasia (n=9)	3	6
	33.3%	66.7%
Endometrial carcinoma (n=1)	1	0
	100.0%	00.0%
Carcinoma in situ of cervix (n=1)	1	0
	100.0%	00.0%
Endocervical adenocarcinoma (n=2)	1	1
	50.0%	50.0%
Squamous cell carcinoma of cervix(n=12)	5	7
	41.7%	58.3%

Out of 21 cases of Atrophic endometrium, 15cases (71.4%) represents in the age group of >50years.
Out of 12 cases of squamous cell carcinoma, 7 cases (58.3%) belong to age group of >50 years.
Carcinoma endometrium was reported in age group of 50years
Carcinoma vagina was reported in age group of >50years.

60years (22%). This can be due to instability of HPO axis in immediate postmenopausal state. This was similar to the study by Karmakar et al,[11] 31.60% were between 46-50 years and 3.20% were in between 66-70 years. In UbejaA et al[12] 29% belong to age group of 46-50 years and in Habib R et al[13] 63.8% belong to 45-55 years of age group. It was also observed that less number of patients reported with PMB at higher age, thus indicating an inverse relationship between age and age of occurrence of postmenopausal bleeding. (Table 1)

In the present study, malignant causes of PMB constitute 30.2% whereas benign causes were 69.8%. Ubeja A et al[12] malignant cases accounts for 39% and benign 61%.(Table 2)

In our study, most common cause was atrophic endometrium (39.6%) Karmakar et al,[11] reported 32% where as in Kothapally K et al,[14] 16.6%which was at par to Bani-Irshaid& Al-Sumadi A[15] and Caspi E et al.[16] The precise reason of bleeding from atrophic endometrium is not known. It is assumed to be due to vascular anatomy or local abnormal haemostatic mechanism.

In our study, Endometrial hyperplasia in 17% Karmakar et al[11] showed endometrial hyperplasia in 21.2% and Kothapally K et al[14] in 6.6% hyperplasia.

In our study endometrial Polyp accounts for 3.8% whereas in Kothapally K et al,[14] endometrial polyps (15%). In endometrial polyp bleeding can be a result of injury to thin walled vein below the surface epithelium or thrombosis of the vessels.

Postmenopausal bleeding due to malignant and premalignant cases in present study was 49.1% (Table 4) which is comparable to Tyagi et al. 58.5%.[17]

Carcinoma cervix accounts for 26.4%, were as in Singh V et al[9] it accounts for 46%. Other studies like Mallick A et al[18] and Dawood et al[19] contribute to 75.68% and 71.2% respectively.

Carcinoma Endometrium among 1.9%, the likelihood of endometrial cancer in a woman with PMB is approximately 9% in Irshaid B et al,[15] 10% in Cheema et al[20] & 9.28% in Mallick A et al.[18] This result may be probably due to high parity in our population group as endometrial carcinoma is more common in nulligravida. As the association of Endometrial carcinoma is more with advancing age, late menopause thus this correlates with our study.

Present results were similar with studies of Nirupama et al,[21] Kothapally et al[14] and Dawood et al[19] as in all these studies showed higher incidence of cervical malignancy than endometrial malignancy.

Carcinoma vagina among 1.9%, Sharma DD et al,[22] 2 out of 150 cases were diagnosed carcinoma vagina accounting for 0.67%.

Endometritis among (1.9%), In Kothapally K et al[14] endometritis was reported in 2 cases out of 30 contributing to 6.6% of all causes of PMB.

6. Conclusion

Chances of cervical malignancy in a women with PMB is very high specially in a set up like ours because of poor sanitation, early marriage, early age of coitus, high parity, sexual promising quality, late reporting of any early signs and symptoms of underlying pathology and zero knowledge of HPV vaccination and lack of awareness leads to invasive carcinoma cervix even reporting at late stage Cervical cancer is a cancer that can be prevented because it has a long pre-invasive state and because the cervical cytology screening program can also detect the pre-invasive stage and because pre-invasive lesion treatment is effective.

7. Source of Funding

None.

8. Conflict of Interest

None.

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