ORIGINAL RESEARCH

Clinical and histopathological characteristics in women with Post menopausal bleeding

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Received: 19 March, 2023 Accepted: 22 April, 2023

ABSTRACT

Background: Postmenopausal bleeding is very common with the prevalence of 10%.Various benign and premalignant/malignant causes are associated with it. Hence detailed study on the clinical and histopathological findings in women with PMB are required. **Materials & Methods:** A prospective observational study done on women with postmenopausal bleeding, at SMGS Hospital over a period of 1 year, in women who were not on any anticoagulants, with the aim of determining the clinical and histopathological findings in women with postmenopausal bleeding and determing the causes of PMB. A total of 120 patients were studied. Observations were tabulated and analysed using appropriate statistical methods (mean and standard deviation, Chi square test), p value <0.05 was taken as significant. **Results:** 75.83% of the patients presenting with postmenopausal bleeding had benign causes and 24.1% had premalignant or malignant causes. Mean age of presentation being 54.97 ± 5.852 years, mostly seen in multipara, 49.16% of patients presented with complaint of postmenopausal bleeding within 3 years, 35% of the patients of PMB had no risk factor and those with, had hypertension, diabetes, obesity either isolated or in combination. Most common cause of postmenopausal bleeding in our study was endometrial hyperplasia without atypia seen in 34.16% of the patients. **Conclusion:** Endometrial carcinoma is a common cause of postmenopausal bleeding. therefore all patients with PMB should be evaluated in detail to rule out the mailgnant causes and decrease the burden of the disease.

Key Words: Post menopausal bleeding, Menopause

INTRODUCTION

Menopause is defined as cessation of menstruation permanently for a period of more than one year.[1] Postmenopausal bleeding (PMB) is defined as blood loss from genital tract occurring at least 12 months after the last menstrual period.[2] It is a common complaint in women worldwide, with the prevalence of 10%.[3]

80%-90% of women with postmenopausal bleeding(PMB) have benign conditions like endometrial or vaginal atrophy (most common), cervical polyps, endometrial polyps, decubitus ulcer in case of uterovaginal prolapse, neglected pessary and forgotten intrauterine device.[4] Some rare causes are chronic endometritis of tuberculosis, thrombocytopenia, leukaemia, usage of anticoagulants and secondary coagulopathy from liver disease.[5] 13% of the patients have endometrial carcinoma.[6] Other cancers like cervical, vaginal, ovarian and vulval are also associated with it.[7] Any bleeding after menopause, should be promptly evaluated with proper clinical examination and specific investigations. The American College of Obstetricians and Gynaecologists recommends transvaginal ultrasound for an initial evaluation to measure endometrial thickness.[8] Other investigations are cervical smear test, diagnostic hysteroscopy and endometrial biopsy.[9,10]

For clinical purposes in patients having PMB an endometrial thickness of ≥4 mm, has a sensitivity of 91.1%, and a specificity of 79.8%.[11]Endometrial biopsy can be obtained using an endometrial pipelle, hysteroscopy or curettage (with or without dilatation).[12]

Postmenopausal bleeding is very common in today's scenario due to factors like increased life expectancy, obesity, hormonal therapy and increased awareness amongst women. Hence this study was undertaken with an aim to determine the clinical and histopathological findings in patients with PMB.

MATERIALS AND METHOD

This is a prospective observational study done on women with postmenopausal bleeding attending the OPD or admitted in the Department of Obstetrics and Gynaecology of SMGS Hospital Jammu over a period of one year (1st November 2018 - 31st October, 2019) after taking proper consent from the patient. Patients with PMB giving consent for diagnostic procedures were included in the study and patients who were on hormone replacement therapy and anticoagulants were excluded from the study. Aim of the study was to determine the clinical and histopathological findings in women with postmenopausal bleeding and determing the causes of PMB.

A total of 120 patients were studied. Consecutive (non probability) sampling was used. Detailed history was taken and thorough examination done. Details regarding vaginal bleeding, vaginal discharge, abdominal mass or pain, recent weight, drug history, past medical and surgical history were taken. Cervical smears were taken, transabdominal or transvaginal scan done to assess endometrial thickness and any other pelvic pathology. Examination under anaesthesia (EUA), cervical biopsy, endometrial biopsy (in patients with ET ≥4mm), polypectomy or dilatation and curettage (D&C) as per indication were performed and sample was sent for histopathological examination to the Pathology department. Observations were tabulated and analysed using appropriate statistical methods (mean and standard deviation , Chi square test), p value <0.05 was taken as significant.

RESULTS

Age of the patients in our study ranged from 45 years to 80 years and mean age was 54.97 ± 5.852 years. The majority of the cases (54.16%) were noticed in age group of 50-54 years. It was observed that 49.16% of patients presented with complaint of postmenopausal bleeding within 3 years of duration of menopause followed by 22.5% between 4-6 years of menopause, 9.16% within 7-9 years of menopause and 19.16% after 10 years of menopause. In our study none of the patient was nulliparous and 95.84% of the patients were multiparous, 30.83% of the patients had parity of 3 followed by 24.16% who had parity of 2. In our study, mean age of menarche seen in the patients was 13.33±1.2 years. Majority of the patients in our study belonged to Middle Class (55%) .

In our study, 35% of the patients of PMB had no risk factor, around 27.5% had Diabetes mellitus(DM), 23.33% had Hypertension(HTN), 10% had DM + HTN, 1.66% had obesity + HTN + DM + obesity each and 0.83% had HTN + obesity.

On pelvic examination, the uterus was normal in 53.33%, bulky in 36.66% and atrophic in 10% of the cases. The above mentioned are given in Table no 1.

Table no 1: Sociodemography of patients with PMB

S. No	Parameter		No. Of Patients(N=50)	Percentage (%)
1	Age(years)	45-49	10	8.33
		50-54	55	54.16
		55-59	31	25.83
		60-64	14	11.66
		65-69	7	5.83
		≥70	3	2.5
2	Socioeconomic status	Upper Class	11	9.16
		Upper Middle Class	40	33.33
		Middle Class	66	55.00
		Lower middle class	3	2.50
		Lower Class	0	0.00
3	Parity	Primi	5	4.16
		Multi	115	95.84
4	Duration of Menopause (years)	1-3	59	49.16%
		4-6	27	22.5%
		7-9	23	19.16
		>10	11	9.16
5	Risk Factors	DM	33	27.5
		HTN	28	23.33
		Obesity	2	1.66
		DM+HTN	12	10
		HTN + Obesity	1	0.83
		HTN +DM+ Obesity	2	1.66

		No Risk factor	42	35
6	P/S examination(cervix and vagina)	Pale	28	23.33
		Healthy	65	54.16
		Ulcerative lesion	27	22.5
7	P/V examination(Uterus size)	Normal	64	53.33
		Atrophic	12	10.00
		Bulky	44	36.66
8	Pap smear	NILM	36	30.0
		Inflammation	10	8.33
		Atrophic	8	6.66
		LSIL	2	1.66
		HSIL	2	1.66
		Not done	62	51. 66
9	ET on USG	1-<4 mm	20	16.66
		≥4-10 mm	54	45.00
		11-15 mm	28	23.33
		16-20 mm	12	10.00
		> 20 mm	6	5.00

Out of 120 patients presenting with postmenopausal bleeding, 100 patients (83.33%) had endometrial thickness ≥ 4mm and 20 patients(16.66%) had endometrial thickness < 4mm. Endometrial biopsy was done in 100 patients with ET ≥4 mm. Out of the these, 41 patients had hyperplasia without atypia, atrophic endometrium in 23, 15 had proliferative endometrium, 12 had endometrial carcinoma, complex hyperplasia with atypical hyperplasia/Endometroid Intraepithelial neoplasia (EIN) in 9, polyp in 5 and secretory endometrium in 4 of the patients. Causes of bleeding in the 20 patients with ET<4 mm were found to be cervical carcinoma in 6 patients, cervical polyp and genital prolapse in 2 patients each and cervicitis in 1 of the patient .

Most common cause of postmenopausal bleeding in our study was Endometrial hyperplasia without atypia in 41 0ut of total 120 patients (34.16%) and the most common malignant cause of PMB was Endometrial carinoma, representing 10% of the total cases. In our study we found that 75.83% of the patients presenting with postmenopausal bleeding had benign causes and 24.1% had premalignant or malignant causes as tabulated below in Table no 2.

Table no 2: Etiology of AUB

S. No	Etiology		No Of Patients(N=120)	Percentage
1	Benign (91/120, 75.83%)	Atrophic	23	19.16%
		Proliferative	15	12.5%
		Secretory	4	3.33%
		Hyperplasia without Atypia	41	34.16%
		Uterine polyp	5	4.16%
		Genital prolapse	2	1.66%
		Cervicitis	1	0.83%
		Cervical polyp	2	1.66%
2	Malignant (29/120, 24.1%)	Atypical endometrial hyperplasia/EIN	9	7.5%
		Endometrial cancer	12	10%
		Cervical cancer	6	5%

In the benign group the mean age was 54.15 ± 5.15 years while in Premalignant/malignant group of PMB it was 57.82 ± 7.35 with p value of 0.005 (significant). The average BMI was 21.77 ± 1.80 kg/m^2 in the benign cause of PMB while it was higher (23.62 ± 4.83 kg/m$^{2)}$ in Pre malignant/ Malignant causes of PMB and the p value was 0.001 (significant). The age of menarche was 13.24 ± 1.21 years in the benign causes of PMB while it was lower (12.74 ± 1.18 years) in the Pre malignant / Malignant causes of PMB with a p value of 0.08 (significant). The parity was 3.20 ± 1.64 years in the benign group while it was higher (3.96 ± 1.50) in the Pre malignant / Malignant group with a p value of 0.007 (significant). Similarly in the benign group while the endometrial thickness was 9.47 ± 4.80 mm it was 11.96 ± 7.41 mm in the malignant/premalignant group with a p value of 0.018 (significant). In the premalignant/malignant group 48.1% patients were Hypertensives compared to 19.1% in the benign group and p value of 0.001 (highly significant). 18.5% of those in premalignant/malignant group had obesity compared to none in the benign group with p value of 0.0001 (highly significant).

Table no 3: Statistical Signifance of sociodemographic factors in etiology of PMB

S.No	Characteristic			Benign	Pre Malignant/ Malignant	P value
1	Mean Age (years)			54.15 ± 5.15	57.82 ± 7.35	0.005
2	BMI (Kg/m^2)			21.77 ± 1.80	23.62 ± 4.83	0.001
3	Age of Menarche (years)			13.24 ± 1.21	12.74 ± 1.18	0.08
4	Parity			3.20 ± 1.64	3.96 ± 1.50	0.007
5	Age of menopause (years)			49.02 ± 1.82	49.44 ± 2.0	0.23
6	Endometrial thickness(mm)			9.47 ± 4.80	11.96 ± 7.41	0.018
7	Risk factors	DM	Yes	30	8	.911
			No	64	18	
		HTN	Yes	18	13	.001**
			No	76	13	
		Obesity	Yes	0	5	.0001**
			No	93	21	

DISCUSSION

In our study, majority of the females presenting with PMB were in the age group of 50-54 years and the mean age of presentation being 54.97 ± 5.85 years with a range of 45 to 80 years. Similar age of presentation i.e. 45-80 years with a mean age of 57.17 ± 7.11 years was seen in study done by Begum et al., 2019. [13] In a study conducted by Escoffery et al., 2002 mean age was 63.6 ±9.3 years.[14]

In our study, the mean age of menopause was 49.1 ± 1.3 years and themaximum number of cases (49.16%) presented within 1-3 years of menopause. Similar results were reported in a study by Sindhuri R et al.,2018 where majority of the cases (53.33%) presented within 1-5 years of the menopause.[15]

In our study the average parity was 3.375 ±1.3 as in study by Jo et al.,2018) with parity of 3.71 ±1.59 in group A having women with age >65 years, while group B had a parity of 2.27±0.97.[16]

In our study, 35% of the patients with PMB had no risk factors and rest of the patients were associated with risk factors such as, diabetes (27.5%), hypertension (23.33%), DM+HTN (10%), obesity (1.66%), HTN+DM+ obesity (1.66%), HTN+ obesity (0.83%). These results were similar to studies done by Begum J et al.,2019 in which diabetes was seen in (29%), hypertension (20%), DM+HTN (13%), obesity (3%) and HTN+DM+obesity seen in 2.5% of the cases.[13]

Gredmark T et al.,1995 in his study observed the highest incidence of atrophic endometrium (49.9%) whereas in our study most common cause was endometrial hyperplasia without atypia (34.16%) followed by atrophic endometrium(19.16%) as the second most common cause.[17] In our study secretory endometrium was found in 3.33% and proliferative in 12.5% of the patients. In the study by Gredmark T et al., 1995 proliferative endothelium was seen in 4.2 % and secretory endometrium in 1.3% of the patients.[17] In our study polyps were seen in 5.83% of cases similar to study by Huang Z et al. in which the polyps were found in 7% of the cases.[18]

In our study, 10% of the patients had endometrial carcinoma which was similar to 11.5% in study by Ferrazzi et al.,1996.[19] The mean endometrial thickness in our study was 15.36 ± 6.9 mm. Bruchim I et al.,2004 had mean endometrial thickness was significantly lower in the absence of endometrial carcinoma (6.9 +/- 4.3 mm) than in its presence (13.5 +/- 7.7 mm) ($p < 0.005$).[20] In our study the benign group had the mean age of 54.15 ± 5.15 years while in premalignant/malignant group it was 57.82 ± 7.35 with p value 0.005 (significant), whereas in a study by Jillani et al.,2010 they did not find any significant association.[21] In our study the parity was 3.20± 1.64 years in the benign group while it was higher (3.96 ± 1.50) in the Pre malignant / Malignant group with a p value of 0.007 (significant). These findings were consistent with that found in a study by Jillani et al., 2010 who found a significant association between multiparity and malignancy.[21]

CONCLUSION

In patients having postmenopausal bleeding and having endometrial thickness < 4 mm are not likely to be associated with endometrial carcinoma therefore endometrial sampling in such patients is not routinely indicated whereas in patients with endometrial thickness ≥ 4 mm, further investigations like endometrial biopsy is required so that accurate histopathological diagnosis is made and managed accordingly.

FUNDING

None

CONFLICTS OF INTEREST

None

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