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Original Research Article

The clinicopathological study of postmenopausal bleeding

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ABSTRACT

Background: Postmenopausal bleeding (PMB) represents one of the most common reasons for referral to gynaecological services, largely due to suspicion of an underlying endometrial malignancy.
Methods: The data was collected from 100 patients with postmenopausal bleeding per vaginum attending the outpatient department or admitted for evaluation under obstetrics and gynaecology in this prospective study. Written and informed consent was taken from all the patients enrolled in the study. They were evaluated by history, clinical examination and investigations like transvaginal sonography, endometrial biopsy, fractional curettage, Papanicolau smear done for all subjects and the specimens collected was sent to the department of pathology for examination and reporting. Descriptive statistics was applied and analyzed by percentages and chi square test.
Results: In patients with post-menopausal bleeding, atrophic endometrium was seen in 31%, proliferative endometrium in 13%, isthmic endometrium in 5%, polyp in 5%, simple hyperplasia without atypia in 35%, simple hyperplasia with atypia in 3%, complex hyperplasia without atypia in 1%, complex hyperplasia with atypia in 1% and endometrial carcinoma in 6% of the patients with PMB. Benign conditions were seen in 94% and malignancy was seen in 6% cases.
Conclusions: The most common causes for postmenopausal bleeding were endometrial hyperplasia (40%), atrophic endometrium (31%), isthmic endometrium (5%), polyp (5%), proliferative endometrium (13%) and endometrial carcinoma (6%). A definitive diagnosis of PMB can be made by histological evaluation. Obesity, hypertension, diabetes mellitus and age since menopause are the risk factors for PMB.

Keywords: Endometrial hyperplasia, Endrometrium, Postmenopausal bleeding

INTRODUCTION

Postmenopausal bleeding (PMB) is not an uncommon clinical presentation in today's gynaecological practice. Contributory factors are perhaps increasing longevity, obesity and hormonal therapy which can be both supervised and unsupervised. Increasing number of women seeking help or reassurance for this problem due to increased awareness would also contribute to this increase. PMB occurs in approximately 10% of postmenopausal women.[1]

Bleeding from the genital tract occurring after the menopause is much more sinister than pre-menopausal bleeding. In the absence of hormonal therapy, any bleeding after menopause, should be promptly evaluated with endometrial sampling.[2]

As per a study on postmenopausal bleeding, the endometrium contributed to 50% of the causes. The findings were atrophic endometrium (16.3%), endometrial hyperplasia (13.4%), proliferative endometrium (8.6%), endometrial polyp (2.8%) and endometrial carcinoma (9.6%).[3]

Therefore PMB requires complete assessment in order to ensure the absence of malignancy and to identify and treat high risk patients. Hence this study was undertaken to investigate the clinical significance and endometrial pathology in patients with postmenopausal bleeding.

METHODS

Source of data

The data was collected from patients with postmenopausal bleeding per vaginum attending the outpatient department or admitted for evaluation under obstetrics and gynaecology department, SDM College of medical sciences and hospital, Sattur, Dharwad from 1st November 2013 to 1st November 2014.

Study design

This study was a prospective study of the patients with postmenopausal bleeding attending the outpatient department or admitted for evaluation under obstetrics and gynaecology department at SDM College of medical sciences and hospital.

Data collection

Written and informed consent was taken from all the patients enrolled in the study. They were evaluated by history, clinical examination and investigations like transvaginal sonography, endometrial biopsy, fractional curettage, Papanicolau Smear and hysteroscopic guided biopsy if required was done for all subjects and the specimens collected was sent to the department of pathology for examination and reporting. Depending on the reports obtained, the data was recorded and analysed by descriptive statistics using percentages.

Inclusion criteria

Post-menopausal women with complaints of per vaginal bleeding**.**

Exclusion criteria

1. Patients with bleeding disorders / blood dyscrasias.
2. Patients on anticoagulant therapy.

The numbers of Sample size were 100.

*Age group***:** Postmenopausal women

Statistical analysis

Descriptive statistics was applied and data was analysed by percentages and chi square test**.**

RESULTS

Majority i.e. 41% of the patients of PMB were in the age group of 50-54 years followed by 26 % between 55-59 years. 47% of the patients presenting with postmenopausal bleeding had attained menarche at 13 years followed by 31% at 12 years and 21% at 14 years. 59% of the patients with postmenopausal bleeding presented within 1-3 years after menopause followed by 12% between 4-6 years, 9% between 7-9 years and 20% after 10 years of menopause. 19% of the patients presenting with postmenopausal bleeding had HTN, 6% had DM, 6% had obesity, 4% had HTN and DM, 3% had HTN with DM and obesity and 2% had HTN and obesity.

Table 1: Distribution according to characteristics (N=100).

		Number	Percent
Age wise distribution			
Age group (years)	45-49	9	9.0
	50-54	41	41.0
	55-59	26	26.0
	60-64	13	13.0
	65-69	7	7.0
	70 and above	4	4.0
Distribution according to age of Menarche			
Age of menarche in years	11	1	1.0
	12	31	31.0
	13	47	47.0
	14	21	21.0
Distribution according to Parity			
Parity	Nulliparous	1	1.0
	1 to 3	70	70.0
	More than 3	29	29.0
Distribution according to age since menopause			
Age since menopause in years	1 to 3	59	59.0
	4 to 6	12	12.0
	7 to 9	9	9.0
	≥10	20	20.0
Distribution according to Risk factors			
Risk factors	No	60	60.0
	DM	6	6.0
	HTN	19	19.0
	Obesity	6	6.0
	DM+HTN	4	4.0
	HTN + obesity	2	2.0
	HTN+DM+obesity	3	3.0

DISCUSSION

Postmenopausal bleeding is defined as any bleeding from the female genital tract in the appropriately aged woman, not using hormonal therapy for at least six months after cessation of menstruation or acyclical vaginal bleeding in a postmenopausal woman using hormonal therapy.[4]

Table 2: Distribution according to investigative procedures.

Distribution according to PAP smear report			
		Number	Percent
PAP smear report	Not done	9	9.0
	NILM	41	41.0
	Inflammation	26	26.0
	Atrophic	13	13.0
Distribution according to TVS (endometrial thickness in mm)			
TVS (endometrial thickness in mm)	1-5 mm	52	52
	6-10 mm	38	38
	11-15 mm	5	5
	16-20 mm	4	4
	> 20 mm	1	1
Distribution according to Endometrial sampling			
Endometrial sampling	Atrophic	31	31
	Proliferative	13	13
	Isthmic	5	5
	Polyp	5	5
	SHWOA	35	35
	SHWA	3	3
	CHWOA	1	1
	CHWA	1	1
	Endometrial carcinoma	6	6

Note SHWOA = Simple Hyperplasia without atypia; SHWA = Simple Hyperplasia with atypia; CHWOA = Complex hyperplasia without atypia; CHWA = Complex hyperplasia with atypia.

Postmenopausal women constitute only 1% of female population. PMB represents one of the most common reason for referral to gynaecological services, largely due to suspicion of an underlying endometrial malignancy.[5] A woman not taking hormone replacement therapy (HRT), who bleeds after the menopause has a 10% risk of having genital cancer and a further 10% risk of significant pathology.[6] This study was undertaken to investigate the clinical significance and endometrial pathology in patients with postmenopausal bleeding.

Age of presentation

In our study the most common age group of patients presenting with postmenopausal bleeding was between 51 to 55 years.

The results found in our study are in accordance with the above quoted studies.

Age since menopause

In our study the incidence of PMB from the time since menopause was most common within 1 to 3 years about 59%. Similar results are found in our study.

Parity

In our study PMB was most commonly found in multiparous women. Similar results were found in other studies like, Kothapally et al where 90% were multiparous women and Nirupama V et al which also had 90% multiparous women presenting with postmenopausal bleeding.[7,8]

Risk factors

In a study done by Kothapally K et al it was observed that the risk factors for postmenopausal bleeding were obesity (43.3%), diabetes (36.6%) and hypertension (13.3%).[7] Similarly in a study by Nirupama V et al risk factors of the patients with PMB like obesity, hypertension and diabetes were 45%, 36% and 13% respectively.[8]

According to our study, 11% of the patients of PMB with HTN had SHWOA on HPE, 5% had atrophic endometrium and 1% had endometrial carcinoma. 4% of the patients OF PMB with DM had atrophic endometrium and 1% had endometrial carcinoma. 1% of the patients of PMB with combined risk factors of HTN with DM and obesity had endometrial carcinoma. 3% of the patients of PMB with no risk factors had endometrial carcinoma.

Transvaginal sonography

In a study done by Kothapally k et al it was observed that women with a thick endometrial thickness >4 mm are at risk of endometrial carcinoma.[9] Kadakola B et al observed that 34% of the patients with PMB had rophic endometrium with endometrial thickness <4mm and none had endometrial carcinoma. 14% of the patients with PMB had endometrial carcinoma with ET >4mm.[8]

Table 3: Histopathological reports in comparison to other studies endometrial sampling.

	Current study	Bharani B et al[45]	Karmarkar P et al[48]	Nirupama V et al[47]
Atrophic	31%	16%	32%	11%
Proliferative	13%	-	16.8%	-
Isthmic	5%	-	-	-
Polyp	5%	-	4%	8%
SHWOA	35%	56%	21.2%	17%
SHWA	3%	-	7.2%	-
CHWOA	1%	8%	-	1%
CHWA	1%	8%	-	-
Endometrial carcinoma	6%	12%	3.6%	12%

SHWOA = Simple hyperplasia without atypia; SHWA = Simple hyperplasia with atypia; CHWOA = Complex hyperplasia without atypia; CHWA = Complex hyperplasia with atypia

According to our study, 27% of the patients of PMB with endometrial thickness between 1-5 mm had atrophic endometrium, 14% had SHWOA and 2% had endometrial carcinoma. 18% of the patients of PMB with ET between 6-10 mm had SHWOA and 2% had

endometrial carcinoma.1% of the patients OF PMB with ET between 11-15 mm and 16-20 mm had endometrial carcinoma.

Pap smear shows that almost 26% of the patients presenting with PMB had NILM, 18% had inflammation, 8% had atrophic smear. TVS ahoes that majority i.e. 52% of the patients with PMB had endometrial thickness between 1-5 mm followed by 38% between 6-10 mm. HPE reports of the endometrial was found to be simple hyperplasia without atypia in 35%, atrophic endometrium in 31% and proliferative endometrium in 13%.

Table 4: Histopathological reports in comparison to other studies.

Endometrial sampling	Current study	Bharani B et al[45]	Karmarkar P et al [48]	Nirupama V et al [47]
Atrophic	31%	16%	32%	11%
Proliferative	13%	-	16.8%	-
Isthmic	5%	-	-	-
Polyp	5%	-	4%	8%
SHWOA	35%	56%	21.2%	17%
SHWA	3%	-	7.2%	-
CHWOA	1%	8%	-	1%
CHWA	1%	8%	-	-
Endometrial carcinoma	6%	12%	3.6%	12%

SHWOA= simple hyperplasia without atypia, SHWA= simple hyperplasia with atypia
CHWOA= complex hyperplasia without atypia, CHWA= complex hyperplasia with atypia

CONCLUSION

Patients with postmenopausal bleeding should be thoroughly evaluated for the various causes of PMB and mainly to rule out endometrial carcinoma.

Risks factors for PMB are age since menopause, obesity, hypertension and diabetes mellitus. A definitive diagnosis of PMB can be made by histological evaluation.

Bulky uterus on P/V examination and endometrial thickness >5mm as per TVS should be further evaluated with endometrial sampling.

Most common causes for postmenopausal bleeding are endometrial hyperplasia (40%), atrophic endometrium (31%), isthmic endometrium (5%), polyp (5%), proliferative endometrium (13%) and endometrial carcinoma (6%).

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