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Post Menopausal Bleeding: An Analytic Study of 100 Cases

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Abstract: ***Objective: To enumerate the age predilection, incidence of malignancies, clinical presentation, histopathological diagnosis and management of post menopausal bleeding. Study design: A retrospective analysis of 100 cases of postmenopausal bleeding who were investigated by hysteroscopy and /or cervical biopsy between January 2014 and December 2014. The data was collected from case records and histopathology reports. Results: The average age of reaching menopause was 48.5 years and in 53% the time of onset of postmenopausal bleeding was between 5-10 years after menopause in our study population. The age range of study population was between 45 and 80 years. The peak incidence of malignancy was observed in age group of 55- 70yrs. The histopathological analysis showed proliferative endometrium (14%), atrophic endometrium (11%), simple hyperplasia (17%), complex hyperplasia with atypia (1%), endometritis, endometrial polyp and cervical polyp in 6%, 8% and 3% respectively. Conservative management was done in 28% with atrophic endometrium, endometritis & benign endometrial or cervical polyp. Patients with proliferative endometrium, simple hyperplasia were observed for recurrent episodes by regular follow-up. Hysterectomy was done to one patient with complex hyperplasia with atypia. Incidence of cervical and endometrial carcinoma was 27% and 12% respectively, who were referred to oncology department for further management. Conclusion: Postmenopausal bleeding is a sinister complaint. It requires careful and timely assessment to eliminate the possibility of malignancy. The risk of endometrial malignancy increases with age. Patient characteristics like nulliparity, hypertension , diabetes mellitus, obesity etc should be taken into account in the diagnostic workup along with increased endometrial thickness ≥4mm by transvaginal sonography (TVS) while considering further endometrial sampling. High cervical cancer preponderance stresses on need for education of patients regarding screening and early diagnosis.***

Keywords: Post menopausal bleeding, Endometrial thickness, Transvaginal scan, Endometrial carcinoma, Cervical Carcinoma

1. Introduction

Post Menopausal Bleeding is defined as abnormal uterine bleeding occurring one year after cessation of menstruation[1]. Post Menopausal Bleeding (PMB) is a common clinical problem,occurs in approximately 3% of post menopausal women[2]. It accounts for a significant proportion of gynecological referrals due to suspicion of underlying malignancy. Etiology of post menopausal bleeding includes benign causes like proliferativeor atrophic endometrium, endometrial polyp or cervical polyp, endometrial hyperplasia (simple, complex with or without atypia) and malignant causes like endometrial carcinoma, cervical carcinoma, uterine sarcoma, estrogen secreting ovarian tumors, vaginal & vulval carcinoma. Rare causes are chronic endometritis of tuberculosis, thrombocytopenia, leukemia, usage of anticoagulants and secondary coagulopathy from liver disease. Even though the most frequent causes of post menopausal bleeding are benign conditions, it is important to exclude endometrial carcinoma and atypical hyperplasia by thorough investigations. There is 10% risk of having endometrial cancer in post menopausal bleeding women whereas risk of cervical cancer is high in developing countries. Patient characteristics like multiparity, early marriage, multiple sexual partners are risk factors for cervical cancer; advanced age, obesity, early menarche, late menopause, hypertension, diabetes mellitus, nulliparity etc., can increase the probability of having endometrial cancer in patients with post menopausal bleeding[3]. A thorough history & clinical examination will help in the diagnosis of local causes. Specific investigations available to complement clinical examination are cervical smear test, Transvaginal scan (TVS) to measure the endometrial thickness, diagnostic hysteroscopy and endometrial biopsy. In general, the thicker the endometrium the higher the likelihood of endometrial cancer, 4mm being the endometrial thickness cut off threshold considered to investigate further[4].

This study was aimed to analyse the age predilection, incidence of malignancies, clinical presentation, histopathological diagnosis and management of post menopausal bleeding.

2. Methods

This was a one year retrospective study, done between January 2014 and December 2014 in the department of obstetrics and gynecology at NRI General Hospital, Chinakakani, Andhra Pradesh. Patients who presented clinically with post menopausal bleeding, investigated by either hysteroscopy and /or cervical biopsy were included in the study. Women who underwent hysterectomy and who were on Hormone Replacement Therapy were excluded. Details regarding the patients such as age, parity, presenting symptoms were recorded. Complete assessment was done by history, clinical examination and investigations which

included papsmear, transvaginal ultrasound, diagnostic hysteroscopy and endometrial and / or cervical biopsy. Histopathological evaluation of biopsy specimens were conducted by pathology department of NRI General Hospital.

The endometrial specimens were classified using WHO criteria as: atrophic, proliferative, secretory, endometrial polyp, simple hyperplasia with or without atypia, complex hyperplasia with or without atypia, carcinoma and others. Endometrial thickness cut off threshold is taken as ≥4mm measured by trasvaginal ultrasound done by radiology department of our hospital for considering biopsy

3. Results

Between January 2014 and December 2014, 100 women with Post Menopausal Bleeding who satisfied the eligibility criteria were analysed in this study. The mean age of these women was 62.5 years (range 45-80yrs), mean age at menopause was 48.5 years (range 45-52), mean time since the onset of menopause was 13years (range 1-25). Distribution of age & time since onset of menopause are shown in Table-1.

Table1: Distribution of age and time since onset of menopause.

	No.of Patients, N=100	Percentage
Age		
<49	10	10%
50-59	45	45%
60-69	34	34%
70-79	10	10%
>80	1	1%
Time Sinceonset of menopause		
<3yrs	23	23%
4-9	30	30%
10-19	35	35%
>20	12	12%

Multiparity was seen in 90% of women. Patients having hypertension and diabetes mellitus were 36% and 13% respectively. We observed that45% were obese patients. The distribution of patient characteristics like hypertension, diabetes mellitus and obesity are shown below.

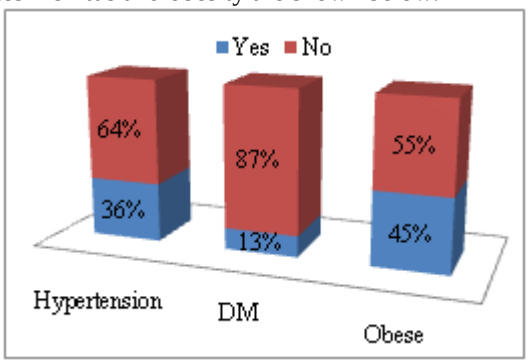

Chart 1: Patient Characteristics

Pap smear was done in all cases without frank growth on cervix and in majority it was inflammatory smear. The pelvic USG showed endometrial thickness of ≥4mm in 60% and 5% had endometrial polyps. Diagnostic hysteroscopy was done in cases without frank growth on cervix, 72 cases were evaluated which revealed bald or scanty endometrium in 19 cases, profuse endometrium in 20, endometrial polyp in 28 and polypoidal necrotic growth in 5 cases. Chart 2 shows hysteroscopic findings.

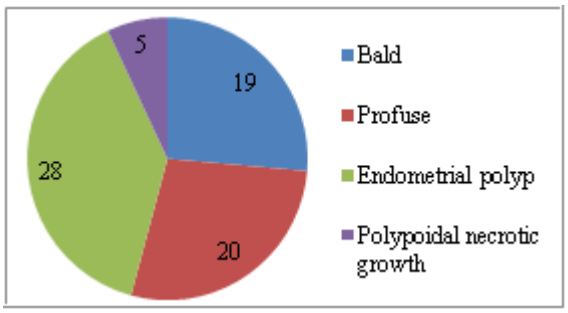

Chart 2: Hysteroscopy Findings

Endometrial sampling was done after diagnostic hysteroscopy. The common histopathology of endometrium was benign conditions comprising 60% and incidence of malignancy was 40%.Pie charts 3 & 4 show distribution of benign and malignant causes.

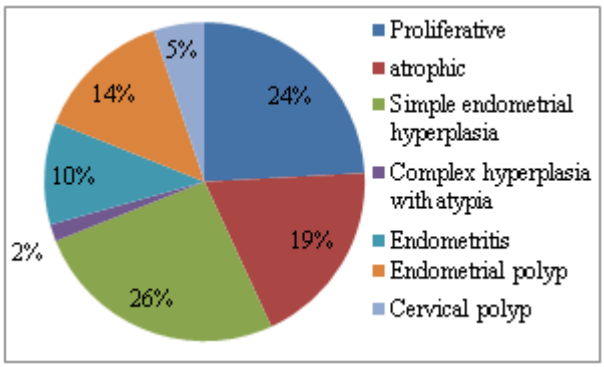

Chart 3: Distribution of benign causes

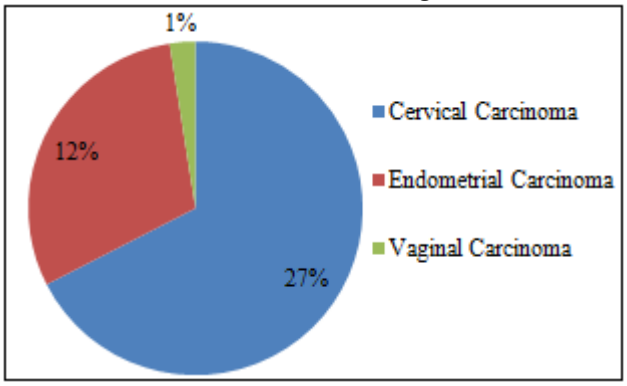

Chart 4: Distribution of malignant causes.

Histopathology reports of cervical biopsy revealed moderately or well differentiated keratinised infiltrating squamous cell carcinoma in majority and 2 cases were poorly differentiated variety. A very rare variety, basaloid squamous cell carcinoma of cervix was also reported in one case which has very poor prognosis. One case of well diffferentiated squamous cell carcinoma of vagina was reported. Cervical cancer still predominates the causes of genital tract malignancies in developing countries whereas endometrial cancer in developed countries.

4. Discussion

In this study, we have analysed the mean age, causes, patient characteristics, histopathological diagnosis and management of post menopausal bleeding. Postmenopausal bleeding was more common within 5-10yrs after reaching menopause. The common age group at risk is between 50-60yrs. The risk of endometrial cancer in women with post menopausal bleeding rises with age, peak incidence was observed in the age group of 55-70yrs. These results are similar to those observed by Opmeer et al[5] and Kothapally K et al[6]

Most of the post menopausal bleeding patients were multiparous associated with medical illnesses like HTN, DM and obesity. One patient was on anticoagulants as she was a case of mitral valve replacement. Pap smear performed routinely did not yield any benefit in diagnosing etiology of post menopausal bleeding. Pelvic USG (TVS) showed endometrial thickness $\geq$ 4mm in majority of cases. Hysteroscopic findings revealed higher incidence of endometrial polyps which were recognized as increased endometrial thickness by TVS. This observation may be rectified by use of saline infusion sonography as primary investigative tool in cases of increased endometrial thickness. The common histopathology of endometrium is simple hyperplasia next common being proliferative endometrium, which was also observed in previous studies done by Kothapally K et al[6], Caspie et al[7]. The incidence of malignancy was 40% out of which 23% are cervical carcinoma which is high compared to earlier study done by Escoffery et al[8] which showed 6.8%. This is because our hospital being a tertiary care centre which caters rural population. With reference to carcinoma, 12 patients were diagnosed as endometrial carcinoma, 27 patients as cervical carcinoma and one with vaginal carcinoma.

Table 2: Comparing frequency of malignancies in various studies

Study	*Year*	*Cancer cervix*	*Cancer endometrium*	*Cancer vagina*
Sengupta A[9], et al	1990	32%	8%	-
Naik VS[10], et al	2004	39.4%	9.6%	-
Kothapally K[6], et al	2013	10%	6.6%	-
Present study	2014	27%	12%	1%

Post Menopausal bleeding was managed according to the current guidelines, patients with atrophic endometrium or endometritis or benign endometrial polyps are managed conservatively. Simple endometrial hyperplasia and proliferative endometrium were observed for recurrent episodes of bleeding whereas precancerous histopathologies like simple & complex hyperplasia with atypia, underwent hysterectomy. Patients with malignancy were referred to cancer hospital for further management.

5. Conclusion

Postmenopausal bleeding is a sinister complaint of postmenopausal women.It requires careful and timely assessment to eliminate the possibility of malignancy as soon as possible. The risk of malignancy especially endometrial carcinoma increases with age. Patient characteristics like nulliparity, hypertension , diabetes mellitus, obesity etc should be taken into account in the diagnostic workup along with increased endometrial thickness $\geq$4mm by transvaginal sonography (TVS) while considering further investigations like endometrial sampling. High cervical cancer preponderance stresses on need for better patient education for screening and early diagnosis.

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