

## Clinico-pathological evaluation of post-menopausal bleeding at tertiary care centre in South Gujarat

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### Abstract

**Introduction:** 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 therapy (HRT). PMB occurs in approximately 10% of Postmenopausal women. Endometrial cancer is the most common gynaecological malignancy but, in India, 80-90% of the women have benign conditions like endometrial or cervical polyps, endometrial atrophy, infection or simple endometrial hyperplasia. Every woman of PMB requires thorough evaluation, clinically and pathologically to exclude malignancy.

**Aims and Objectives:** To find out causes of PMB on the basis of history and clinical examination and to correlate the clinical findings with imaging studies, mainly Endometrial thickness (ET) on Transvaginal sonography (TVS) and Histopathological examination (HPE), if required.

**Materials and Methods:** This study was a prospective study carried out on outdoor/indoor patients admitted in Department of Obstetrics and Gynaecology at tertiary care hospital from January 2020 to June 2021.

**Result:** Majority (28.57%) of the patients with PMB were from 46-50 years age group. Diabetes mellitus (22.85%) and Hypertension (21.42%) were the major risk factors associated with PMB. On TVS, 44.28% patients had ET between 5-10mm. Majority of patients had no pathology (51.43%) while remaining had fibroid (15%), adenomyosis (11%), Endometrial Hyperplasia (8.57%), Fibroid polyp (1.42%) and cervical polyp (1%). Atrophic endometritic was the most common benign cause, seen in 30% of the patients. Malignant etiology for PMB was seen in 11.47% of the patients. Out of 70 patients, 68.57% of the patients underwent surgical management, 30% patients underwent Conservative Management and 1.4% patient had radiotherapy.

**Conclusion:** PMB is a symptom of varied aetiologies, benign and malignant. Therefore, careful histologic examination to identify the aetiology should be emphasized. Accurate diagnosis makes it much easier to counsel the patient about further course of management.

**Keywords:** Postmenopausal bleeding

## Introduction

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 therapy (HRT) <sup>[1]</sup>. Postmenopausal bleeding occurs in approximately 10% of Postmenopausal women. Common menopausal age in Indian women is around 42-50 years. Bleeding per vagina postmenopausal is one of the most common reason for referral to gynaecological department, largely due to suspicion of genital tract malignancy. About 90% of the patients with endometrial cancer, <sup>2</sup> present with postmenopausal bleeding, while only 10-15% of the women having PMB are diagnosed as endometrial carcinoma. As the first line of investigation, Transvaginal ultrasonography (TVS) is 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. <sup>3</sup> In suspected cases, Endometrial Biopsy/Dilatation and curettage or hysteroscopic guided biopsy are found to be the best modality to diagnose the aetiology for the bleed.

## Material and Methods

**Study design:** Prospective study

**Study area:** The study was carried out in outdoor/indoor patients admitted in Department of Obstetrics and Gynaecology at tertiary care hospital.

**Study duration:** 18 months (January 2020-June 2021).

**Sample size:** 70

## Inclusion criteria

(All/any of the following)-

Postmenopausal women with complaint of per vaginal bleeding.

Women who give consent for it.

## Exclusion criteria

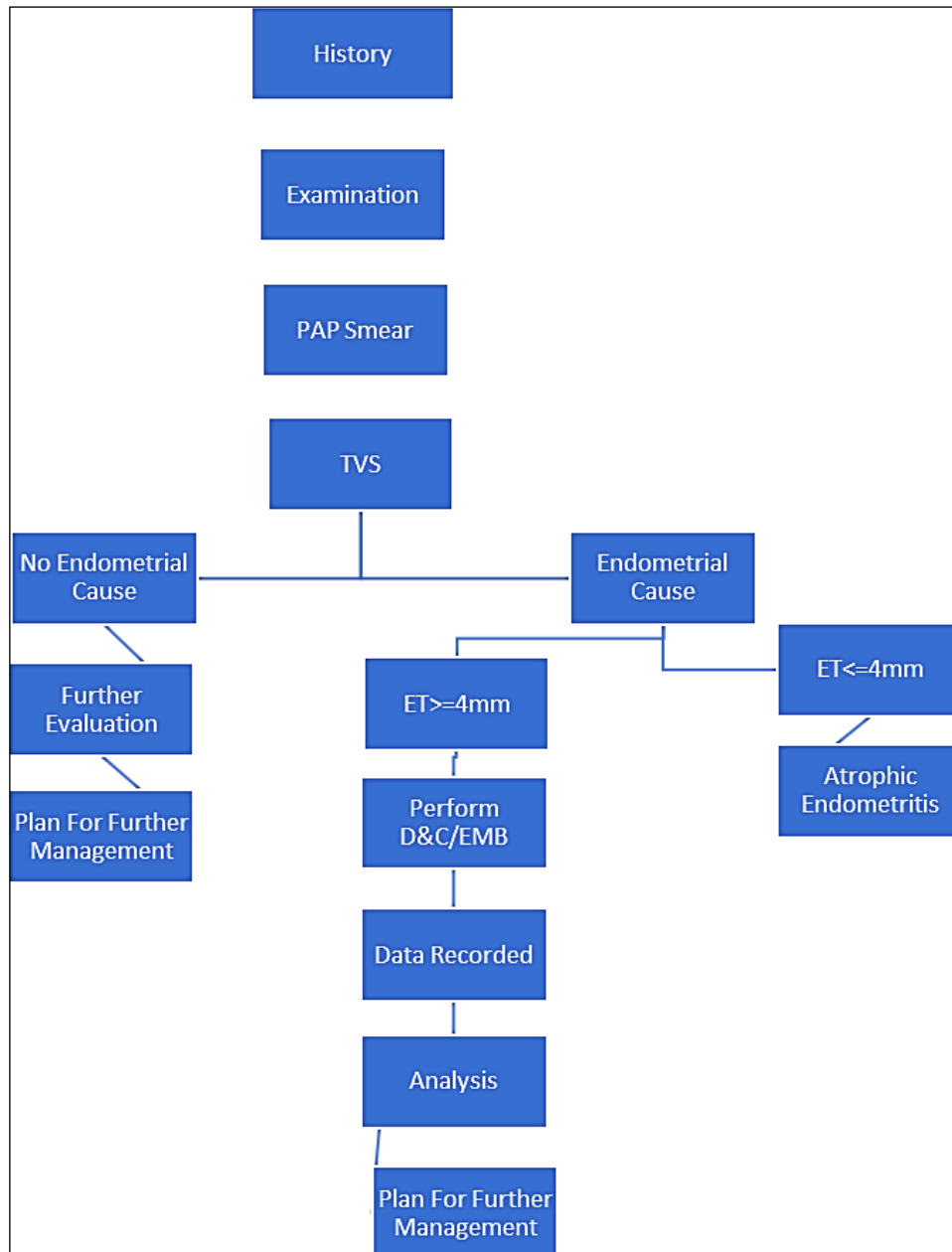
(All/any of the following)-

Patients with bleeding disorders.

Patients on anticoagulant therapy.

Patients on hormonal therapy.

Patients who refuse to give consent.



**Fig 1:** Methodology Chart

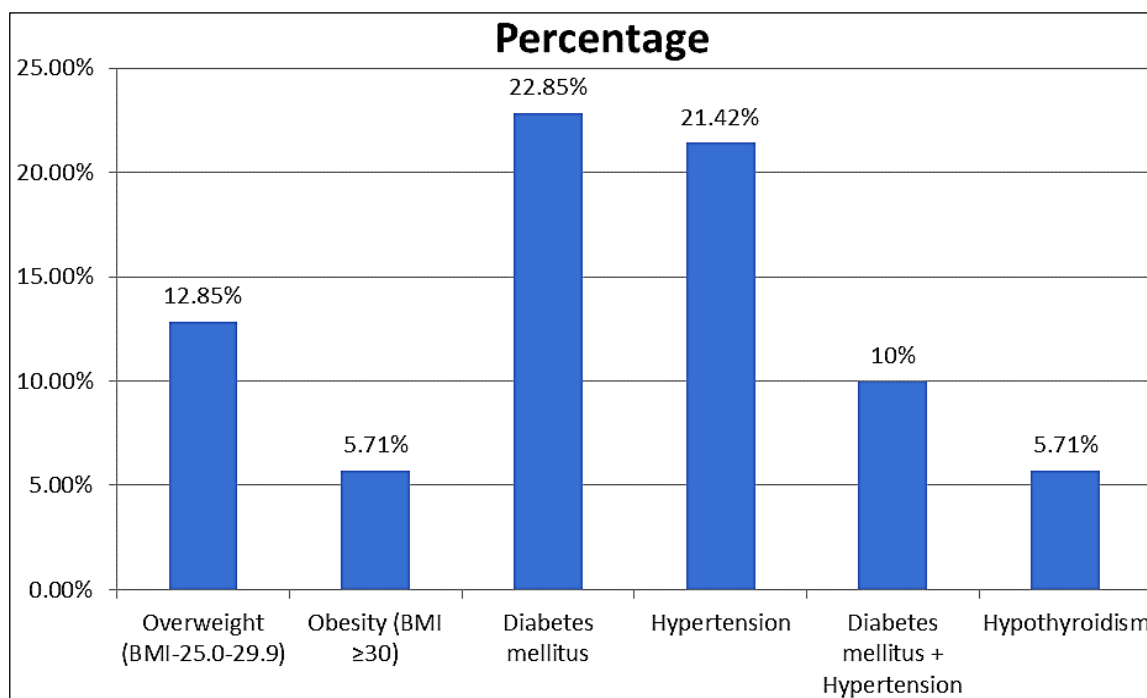
## Results and Discussion

**Table 1:** Age wise Distribution of Postmenopausal bleeding patients

| Age Group (Years) | Number (n=70) | Percentage |
|-------------------|---------------|------------|
| 41-45             | 4             | 5.71%      |
| 46-50             | 20            | 28.57%     |
| 51-55             | 18            | 25.71%     |
| 56-60             | 15            | 21.42%     |
| 61-65             | 10            | 14.28%     |
| 66-70             | 3             | 4.28%      |

Maximum patients presenting with Postmenopausal bleeding were from 46-50(28.57%) age group and Minimum patients presenting with Postmenopausal bleeding were of 66-70(4.28%) age group.

In a similar study done by Lidor *et al.*, of 226 postmenopausal bleeding cases revealed that the ages of patients ranged from 40-81 years with a mean of 56 years <sup>[4]</sup>.



**Fig 2:** Distribution of Postmenopausal bleeding patients according to High risk factors

In this study 9 (12.85%) patients were overweight, 4(5.71%) patients had associated obesity, 16 (22.85%) patients had associated diabetes mellitus, 15 (21.42%) had associated hypertension, 7 (10%) had associated both diabetes mellitus and hypertension and 4 (5.71%) had associated hypothyroidism.

In a similar study done by Ind T in his meta-analysis noted that endometrial malignancy was associated with obesity in 33%, diabetes in 31% and hypertension in 30.7% [5].

**Table 2:** Distribution according to endometrial thickness on Transvaginal Sonography (TVS)

| Endometrial Thickness | Number (n=70) | Percentage |
|-----------------------|---------------|------------|
| <4 mm                 | 06            | 8.57%      |
| 5-10 mm               | 31            | 44.28%     |
| 11-15 mm              | 27            | 38.57%     |
| >15 mm                | 06            | 8.57%      |

Out of 70 patients, on transvaginal sonography (TVS) 31(44.28%) patients had endometrial thickness between 5-10 mm while 6 (8.57%) patients had endometrial thickness between <4 mm and >15 mm respectively. In a similar study done by Nasri MN *et al.*, found that 63% of the endometrium was atrophic and ultrasound endometrial thickness was 5 mm or less [6].

**Table 3:** Distribution of Postmenopausal bleeding patients according to Histopathological findings

| Histopathological Findings        | Number (n=70) | Percentage |
|-----------------------------------|---------------|------------|
| Atrophic endometrium              | 27            | 38.57%     |
| Hyperplasia without atypia        | 14            | 20%        |
| Atypical Hyperplasia              | 05            | 7.14%      |
| Proliferative Phase               | 09            | 12.85%     |
| Secretory Phase                   | 07            | 10%        |
| Carcinoma of Endometrium          | 06            | 8.57%      |
| Endometroid carcinoma of ovary    | 01            | 1.42%      |
| Squamous Cell Carcinoma of Cervix | 01            | 1.42%      |

Out of 70 patients, Atrophic endometrium was the commonest i.e., 27(38.57%) followed by

Hyperplasia without atypia 14(20%), Proliferative Phase 9(12.85%), Secretory Phase 7(10%), Carcinoma of endometrium 6(8.57%), Atypical Hyperplasia 5(7.14%), Endometroid carcinoma of ovary 1(1.42%), Squamous Cell Carcinoma of Cervix 1(1.42%). This is similar to the findings observed by Ruchita (2014) *et al.*,<sup>[7]</sup> and Arati (2013) *et al.*,<sup>[8]</sup> Pacheco and Kempers (1968)<sup>[9]</sup> found atrophic endometrium in 57% of cases.

**Table 4:** Distribution according to aetiology

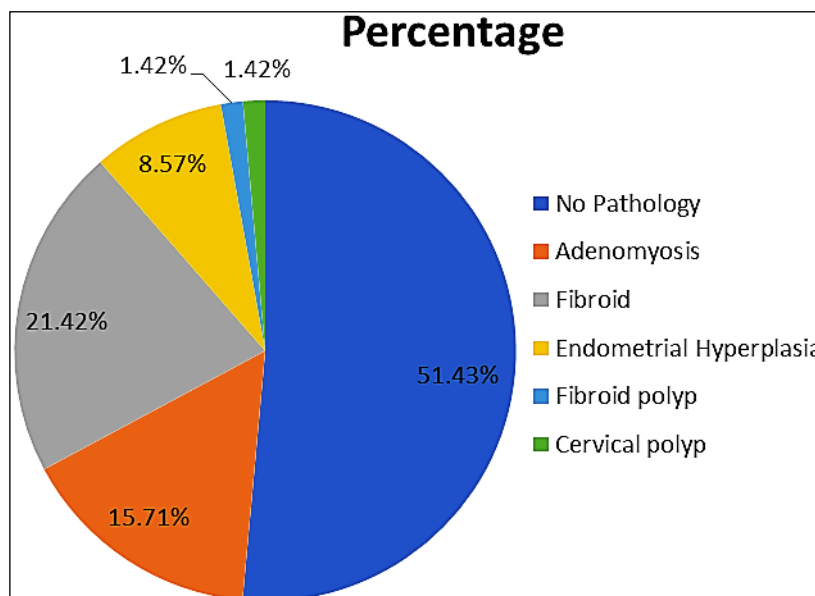
| Aetiological groups | Number (n=70) | Percentage |
|---------------------|---------------|------------|
| Benign cause        | 62            | 88.57%     |
| Malignant cause     | 08            | 11.42%     |

Benign histopathology of endometrium was more common comprising of 88.57% cases and 11.42% cases had Malignancy which was comparable with study done by Kavitha *et al.*, (2014) in which benign cause was 76.9% and 13.5% had malignant etiology.

**Table 5:** Distribution of Postmenopausal bleeding patients according to Causes of Postmenopausal bleeding

| Causes                           | Number (n=70) | Percentage |
|----------------------------------|---------------|------------|
| <b>Benign causes</b>             |               |            |
| Atrophic endometritis            | 21            | 30%        |
| Fibroid                          | 15            | 21.42%     |
| Adenomyosis                      | 11            | 15.71%     |
| Prolapse with Decubitus ulcer    | 10            | 14.28%     |
| Cervicitis with Senile vaginitis | 03            | 4.28%      |
| Cervical polyp                   | 01            | 1.42%      |
| Fibroid polyp                    | 01            | 1.42%      |
| <b>Malignant causes</b>          |               |            |
| Carcinoma of endometrium         | 06            | 8.57%      |
| Carcinoma of cervix              | 01            | 1.42%      |
| Carcinoma of ovary               | 01            | 1.42%      |

Most common benign cause of Postmenopausal bleeding were Atrophic endometritis i.e., 21 (30%). Most common malignant causes of Postmenopausal bleeding were Carcinoma of endometrium i.e., 6(8.57%) followed by Carcinoma of cervix 1 (1.42%), Carcinoma of ovary 1 (1.42%) which is similar to observed by Arati *et al.*, (2013) Ca endometrium was 9.28% and Ca ovary 3.57%<sup>[8]</sup>.



**Fig 3:** Distribution of Postmenopausal bleeding patients according to Transvaginal sonography (TVS) findings**Table 6:** Distribution of Postmenopausal bleeding patients according to Management

| Diagnosis                        | Operative | Radiotherapy | Chemotherapy | Conservative | Total |
|----------------------------------|-----------|--------------|--------------|--------------|-------|
| Atrophic Endometritis            | -         | -            | -            | 21           | 21    |
| Adenomyosis                      | 11        | -            | -            | -            | 11    |
| Carcinoma of Cervix              | -         | 01           | -            | -            | 01    |
| Fibroid                          | 15        | -            | -            | -            | 15    |
| Carcinoma of Endometrium         | 06        | -            | -            | -            | 06    |
| Prolapse with Decubitus ulcer    | 10        | -            | -            | -            | 10    |
| Cervicitis with Senile Vaginitis | 03        | -            | -            | -            | 03    |
| Carcinoma of Ovary               | 01        | -            | -            | -            | 01    |
| Cervical polyp                   | 01        | -            | -            | -            | 01    |
| Fibroid polyp                    | 01        | -            | -            | -            | 01    |
| Total                            |           |              |              |              | 70    |

Out of 70 patients, 21 patients of atrophic endometritis were treated with oestrogen therapy, 11 cases of adenomyosis, 15 cases of fibroid, 10 cases of prolapse with decubitus ulcer, 3 cases of cervicitis with senile vaginitis, 1 case of cervical polyp and fibroid polyp were underwent hysterectomy. 6 cases of carcinoma of endometrium were underwent radical hysterectomy, 1 case of carcinoma of cervix was treated with radiotherapy. 1 case of carcinoma of ovary was underwent staging laparotomy.

## Conclusion

With increased life span the incidence of Postmenopausal bleeding is on rise. Since the incidence of malignancy is quite high, any bleeding in that age group should be evaluated in the line of malignancy unless otherwise proved. We have seen that incorporation of clinical evaluation aided with TVS and endometrial biopsy help us in guiding treatment strategies. The beneficial effects are evident for early disease detection and improved patient care. Though the main aim of evaluation of cases of Postmenopausal bleeding is to exclude premalignant and malignant lesions of the endometrium, majority of cases had benign causes for Postmenopausal bleeding.

## Limitations of study

The number of patients included in this study was 70 from single centre. To formulate a definitive protocol, further multicentric studies with larger samples should be conducted. Due to limited duration of our study in case of Endometrial/cervical malignancy, long term follow up of patients was not evaluated.

**Conflicts of interest:** None Declared.

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