

# CLINICAL PATTERN OF GENITAL TRACT PATHOLOGIES IN WOMEN WITH POSTMENOPAUSAL BLEEDING AT FAUJI FOUNDATION HOSPITAL RAWALPINDI

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Available Online 30-March 2020 at <http://www.jkcd.edu.pk>

DOI: <https://doi.org/10.33279/2307-3934.2020.0119>

## ABSTRACT

**Objective:** Present study was carried out to determine the clinical pattern of genital tract pathologies in women with postmenopausal bleeding at Fauji Foundation Hospital Rawalpindi.

**Materials and Methods:** This descriptive cross sectional study was carried out at Gynaecology and Obstetrics Department of Fauji Foundation Hospital Rawalpindi, on a sample size of 262, over a period of two years from June 2017 to May 2019.

**Results:** Maximum number of patients with postmenopausal bleeding was found in 5th decades of life. Benign cases accounted for 235/262 (89.65%), pre-malignant 20/262 (7.6%) and malignant 7/262 (2.6%). Most common cause of postmenopausal bleeding was endometrial hyperplasia without atypia (20%). Adenocarcinoma of uterus was the most common (2%) among genital tract malignancies.

**Conclusion:** Post-menopausal bleeding should be investigated promptly to determine the cause of bleeding. Endometrial hyperplasia is the most common cause of post-menopausal bleeding. Early diagnosis and treatment is essential to prevent progression to malignancy.

**Keywords:**

## INTRODUCTION

Menopause, as defined by WHO is the permanent cessation of menstrual periods for one year due to loss of follicular activities of the ovaries.<sup>1</sup> It occurs in women aged 45-55 years with average of 51 years.<sup>2</sup> It can occur in younger women following

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Available Online 30-March 2020 at <http://www.jkcd.edu.pk>

DOI: <https://doi.org/10.33279/2307-3934.2020.0119>

premature menopause. According to World Health Organization, nearly 1.2 billion women will be aged more than 50 years by 2030. So countries are advised to include health needs of menopausal women in their public health programs.<sup>3</sup> Postmenopausal bleeding (PMB) is the bleeding from genital tract of a woman after 12 months of amenorrhea.<sup>4</sup> It is a clinical condition that occurs in 10% of postmenopausal women.<sup>5</sup> Postmenopausal bleeding is usually uterine in origin but ovarian, fallopian tubes, cervical, vaginal and vulval pathologies also contribute to PMB.<sup>6</sup> Extra genital sites like bladder, urethra, bowel and

rectum may also be a source of bleeding.<sup>7</sup>

PMB is associated with genital tract pathologies, both benign and malignant.<sup>8</sup> Benign lesions such as endometrial poly and hyperplasia account for 40% of the causes of PMB.<sup>7</sup> Other causes are vaginal atrophy and chronic endometritis.<sup>9</sup> Endometrial malignancies are found in 10-15% of women with postmenopausal bleeding.<sup>10</sup> Postmenopausal bleeding is the most common clinical feature of endometrial carcinoma.<sup>11</sup> Endometrial carcinoma is the most common gynaecological malignancy of female genital tract.<sup>12</sup> However, population based screening does not exist.<sup>13</sup> Cervical malignancy is also found to be associated with PMB. It is the second most common malignancy of female genital tract and 80% of the cases occurs in developing countries due lack of well-established cervical screening program.<sup>14</sup> Other genital tract malignancies that cause postmenopausal bleeding are granulose cell tumor of ovary, fallopian tube cancer, vaginal cancer, vulval cancer and leiomyosarcoma.<sup>15</sup> Therefore early diagnosis is important to exclude underlying pre malignant and malignant conditions in these women as survival decreases with advancing stage of cancer.<sup>16</sup>

The present study was carried out to determine various benign, premalignant and malignant pathologies of genital tract associated with postmenopausal bleeding in our population. The results will be shared with gynecologist and community to increase awareness regarding early evaluation and prompt management of the patients with postmenopausal bleeding.

## MATERIALS AND METHODS

A descriptive cross-sectional study was conducted in Obstetrics and Gynecology Department, Fauji Foundation Hospital, Rawalpindi, over a period of two years from June 2017 to May 2019. A total of 262 patients were included in the study. Non probability purposive sampling technique was used. All patients with postmenopausal bleeding confirmed on history were included in the study. Patient with hysterectomy, trauma to genital tract, coagulation disorders, using hormone replacement therapy and anticoagulation medication were excluded. These were the confounders and made the study results biased were excluded from the study.

Permission was taken from the hospital ethical committee. Data was collected from all those patients

who were received with postmenopausal bleeding. An informed written consent was taken from all the patients or their relatives. A detailed history about the age, obstetrical, past menstrual, surgical and medical history was taken. Examination including general physical examination, abdominal and vaginal examination was done. Transvaginal ultrasound was performed to note the size of uterus, endometrial thickness and adnexal pathologies. Endometrial sampling was done depending on examination findings. Friendly environment was provided to collect the accurate data.

All the ultrasounds were done through expert sonologist and strictly exclusion criteria was followed so that to control confounders and bias in our study results.

Data was analyzed using Statistical tests for Social Sciences (SPSS) version 21. Means +standard deviations were calculated for continuous variables. Proportions and frequencies were calculated for categorical variables. Results were presented in the form of tables and figures.

## RESULTS

Age range of our patients was  $50-72 \pm 7.3$  years. Maximum number of patients was in 5th decade (Table-1). Parity varied from nulliparous to para 12. Duration of bleeding ranged from single episode to up to 2 years.

Benign cases accounted for 235/262 (89.65), pre-malignant 20/262 (7.6%) and malignant 7/262 (2.6%) as shown in Table-2. Most common cause of postmenopausal bleeding was endometrial hyperplasia without atypia which accounted for 20% of the cases. Other causes were endometrial polyp and disordered proliferative endometrium 18%, proliferative endometrium 17%, secretory phase endometrium 11% and atrophic changes 6%. Hyperplasia with atypia accounted for 8%. Incidence of genital tract malignancy was 2.6%. Most common was uterine adenocarcinoma 2% (Figure-1).

## DISCUSSION

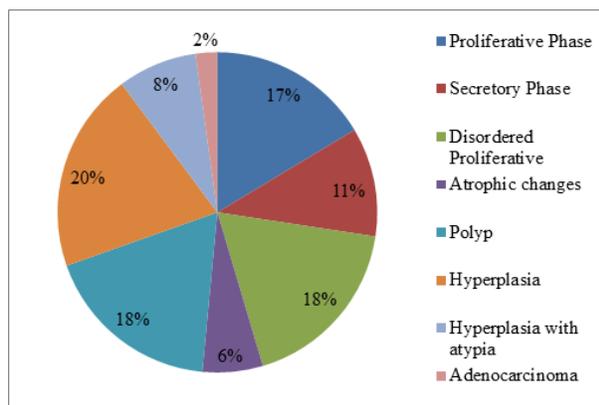
The primary aim of early investigating a patient with postmenopausal bleeding is to rule out malignancy. Our study revealed maximum number of patients in 5th decade of life. Similar results were found in a study conducted in by Rahman et al.<sup>9</sup> Patients presented with single episode of bleeding

**Table: 1 Descriptive statistics (n=262)**

Age groups	Frequencies
Below 55	174 (66.4%)
Between 55 and 60	54 (20.6%)
Above 60	34 (12.9%)

**Table: 2 Genital tract pathologies in different age groups**

Age Group of Patient	Frequency	Percent (%)	
Below 55	Benign	162	93.1
	Pre-Malignant	8	4.6
	Malignant	4	2.2
	Total	174	100
Between 55 and 60	Benign	48	88.9
	Pre-Malignant	5	9.3
	Malignant	1	1.9
	Total	54	100.0
Above 60	Benign	25	73.5
	Pre-Malignant	7	20.6
	Malignant	2	5.9
	Total	34	100.0



**Fig 1: Clinical pattern of endometrial pathologies with PMB**

and history of bleeding for 2 years. This wide range of duration of bleeding is due to the fact that the hospital in which study was conducted caters a large number of entitled and non-entitled patients with genital tract pathologies from general population. So, entitled patients usually seek early advice from their gynaecologist. Early presentation of patient having PMB is significant as it would help in early diagnosis and management of pre-malignant and malignant conditions.

Studies show that 80-90% of the patients with PMB have benign etiology, however pre-cancerous

and cancerous tumors must be excluded in 10-20% of cases.<sup>17</sup> This is consistent with findings of our study where 90% of the cases of PMB were benign while 10% were pre-malignant and malignant.

A wide range of benign conditions were found in patients with PMB in our study. Among these hyperplasia without atypia was found most common followed by endometrial polyp and disordered proliferative endometrium. Endometrial hyperplasia is an estrogen dependent condition. Both exogenous estrogen stimulation such as unopposed estrogen therapy and endogenous therapy such as obesity, anovulation and estrogen producing tumors are the risk factors. Risk of endometrial hyperplasia can be reduced by decreasing use of exogenous estrogen and managing risk factors for producing endogenous estrogen in our population.<sup>17</sup> A study conducted by Khanger et al showed atrophic vagina to be the most common cause of PMB.<sup>18</sup> The differences may be due to different selection criteria of the patients or different geographical and racial factors.

In pre-malignant cases endometrial hyperplasia with atypia was found in 7.6% in our study. A study conducted by Vasudev showed similar results. Atypical endometrial hyperplasia is a pre-cancerous condition, if not treated timely leads to endometrial carcinoma in 60-70% of the cases.<sup>19,20</sup> Incidence can be reduced by addressing the modifiable risk factors like obesity and exogenous hormones intake causing endometrial hyperplasia with atypia.<sup>17</sup>

The reported incidence of malignancy is variable in different population. The incidence is lower in white population 1% to 54% in African population.<sup>21</sup> Our study proposed an incidence of malignancy of 2.6% with highest incidence of adenocarcinoma of uterus which accounted for 2% of study population. This is comparable to a group of researcher who showed incidence of 12%. Decreasing incidence of malignancy suggests increasing awareness in general population to seek early medical advice for the complaint and early investigation in all women with PMB by gynaecologists.<sup>10</sup> The incidence of endometrial carcinoma reported to increase with age.<sup>9</sup> It was found to be 1% at the age of 50 and 25% at the age of 80 years.<sup>21</sup> However, results of our study reported peak incidence of endometrial carcinoma in women with age less than 55 years. Risk factors for endometrial carcinoma are obesity, hypertension,

diabetes, and hormones intake.<sup>22</sup> it is suggested that early age of presentation of endometrial carcinoma is attributed to injudicious use of hormones and poorly controlled diabetes and hypertension in our population.

There are well developed strategies to investigate women with PMB. It is recommended to use those strategies to investigate and timely manage the underlying condition.

## CONCLUSION

Post-menopausal bleeding is an alarming symptom in menopausal women. In our study a wide variety of genital tract pathologies including both neoplastic and non-neoplastic conditions were documented. The predominant finding was endometrial hyperplasia without atypia followed by endometrial polyp and disordered proliferative endometrium. Our findings suggest adenocarcinoma of uterus as the most common cause of postmenopausal bleeding. There are no defined criteria for screening of endometrial carcinoma. So a population screening programs must be clearly defined and tailored to society needs. Reversible risk factors for endometrial hyperplasia such as obesity and exogenous unopposed estrogen in hormone replacement therapy should be recognized and addressed promptly.

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