

Histopathological Changes in Female uterus with Postmenopausal Vaginal Bleeding in Benghazi Medical Center (2019-2021)



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ABSTRACT: Postmenopausal bleeding is an important symptom and requires careful and timely assessment to eliminate the possibility of malignancy. A thorough examination may help in the diagnosis of vulval, vaginal, cervical, or pelvic pathology. This study was carried out to find the probable causes in patients presenting with postmenopausal bleeding. The study included 55 women with postmenopausal bleeding and was conducted in the department of Obstetrics and Gynaecology of Benghazi medical center from January 2019 to December 2021. Diagnostic curettage and cervical biopsy were done and histopathology report was collected. The mean age of the patients was 57.74 years (range 45-75 years), and the median age of menopause was 60 years. Among the patients 5 (9.3%) had only diabetes and 3 (5.6%) patients had hypertension. fifty patients (90.3%) were multipara, about (87%) were had no family history of same illness. by diagnostic curettage and cervical biopsy revealed suspected endometrial sarcomas in 1 cases (1.9%) and fibroid in 1 case (1.9%). The most common clinical finding was endometrial adenocarcinoma in 50 patients (92.6%). About 76% (of patients with adenocarcinoma present with postmenopausal bleeding, and three patients (3.7%) had hyperplasia.

KEYWORDS: Menopause, post-menopausal bleeding, endometrial carcinoma, multiparous, nulliparous

INTRODUCTION

Abnormal uterine bleeding is a common gynaecological symptom. Postmenopausal bleeding (PMB) is defined as bleeding that occurs 12 or more months after the last menstrual period. The average age of menopause is fifty-one years. Menopause occurs when the ovaries cease making estrogen, and the patient is no longer ovulatory (1). Many women who experience postmenopausal bleeding may not have other symptoms. Etiology of PMB include: non gynaecological causes like trauma or a bleeding disorder, use of hormone replacement therapy. Other causes include vaginal atrophy, endometrial hyperplasia, endometrial polyps or cervical polyps, carcinoma of cervix, uterine sarcoma, ovarian carcinoma (especially oestrogen-secreting ovarian tumors), vaginal carcinoma and carcinoma of vulva (2). Endometrial cancer usually presents as PMB. Malignancy must be excluded as a cause of bleeding in postmenopausal patients as PMB is the most important presenting symptom of endometrial cancer (3). PMB accounts for approximately 5% of gynecologic office visits. About 1-14% of postmenopausal bleeding will be secondary to endometrial cancer. Endometrial cancer is the most common gynecologic malignancy in the United States. In 2017, there were over 61,000 new cases of uterine cancer; there were almost 11,000 deaths. Most cases of uterine cancer are endometrial in origin (92%). Vaginal bleeding is the presenting sign in more than 90% of postmenopausal women with endometrial cancer (4). In Benghazi reports taken from 2002-2011 indicated that a 52% of female genital cancer cases were endometrial cancer followed by cervix cancer 30.9% (5).

The primary evaluation of postmenopausal women who present abnormal uterine bleeding includes a medical history and a pelvic examination, as well as a Pap smear if appropriate, to look for vulvar or vaginal lesions, signs of trauma, and cervical polyps or dysplasia (6). Cervical dysplasia seldom causes abnormal uterine bleeding, but it may be associated with postcoital bleeding. Investigative studies, such as a uterine biopsy, ultrasound, hysteroscopy or dilation and curettage, may be required. Cervical cultures may be indicated if the patient is at risk for infection or if symptoms of infection are present, treatment will depend on the cause determined (1) (2).

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AIM AND OBJECTIVE

This study was carried out to find the probable causes of patients presenting with postmenopausal bleeding and to investigate the clinical significance of postmenopausal bleeding in terms of risk factors, the incidence of endometrial carcinoma and histopathological evaluation of endometrium.

Patients and Methods:

A retrospective observational study conducted at Benghazi Medical Center (BMC), Benghazi, Libya. A review of documents was carried out from files of PMB patients who were admitted to the hospital from January 2019 through to December 2021. Factors that are usually associated with PMB were studied (age, parity, menopausal duration, past medical history, family history, drug history and the number of PMB episodes). This study included 55 women with postmenopausal bleeding. Diagnostic curettage and cervical biopsy were done and a histopathology report was collected. Menopause is defined as the permanent cessation of menstruation for at least one year at the end of reproductive life. In the history, emphasis was given on the patient's age, socioeconomic status, the interval between menopause and the onset of abnormal vaginal bleeding, obstetric history, pharmacological therapy, and family history of malignancy.

Statistical analysis, data were evaluated statistically by using the SPSS statistical package version 20, independent Chi-square test was used to test whether two categorical variables are related to each other, a Q value of less than 5 was considered as statistically significant. Microsoft Word and Excel have been applied to make tables, graphs, pie diagram, etc.

RESULTS

The total number of cases included in this study were 55 cases diagnosed over the period (2019 –2021). Figure 1 shows that the highest frequency of post menopausal bleeding cases was admitted during the year 2019 (n:22, 38.9%), followed by the year 2020, where (n:20, 37.0%) of cases were admitted. The lowest frequency (n:13, 24.1 %) of admitted cases was during the year 2021.

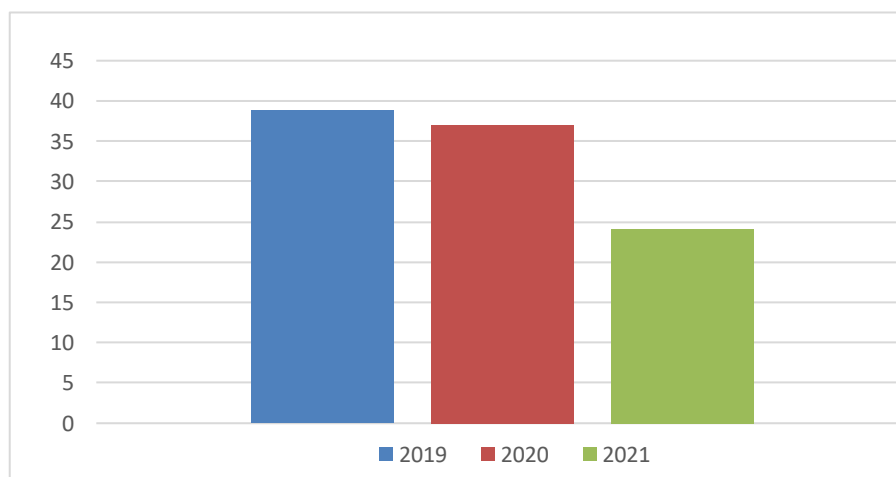


Figure 1. distribution of PMB cases according to year of admission

Patients' characteristics of PMB patients are shown in Table 1. Most of postmenopausal bleeding patients were between 51-60 years (38.9%) as the youngest case aged 45 years and the eldest one was 75 years old. The highest proportion of cases (38.9%) were aged 51 years and above, while the cases aged 50 years and less and above 70 represented (14.8%) of the cases.

Table 1: Age category of postmenopausal women

| Age | No. of cases | Percentage% |
|---------|--------------|-------------|
| 45 - 50 | 8 | 14.8 % |
| 51 - 60 | 22 | 38.9 % |
| 61 -70 | 17 | 31.5 % |
| 70< | 8 | 14.8 % |

In Table 2. Most of the postmenopausal bleeding patients were multiparous (90.7%). 9.3% and 5.6% of patients were having diabetes mellitus and hypertension and on treatment, respectively. 85.1% of women had no drug or medical history and 87% had no family history of the same illness.

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Table 2. Distribution of parity, medical and drug history and family history of menopausal women

| | No. of patients (N=55) | Percentage (%) |
|--------------------------------------|---------------------------|-------------------|
| Parity | | |
| Nullipara | 5 | 9.3% |
| Multipara | 50 | 90.7% |
| Past medical and drug history | | |
| Hypertension | 3 | 5.6% |
| Diabetes mellitus | 5 | 9.3% |
| no illness | 47 | 85.1% |
| Family history | | |
| Yes | 8 | 13 % |
| No | 47 | 87% |

Figure 2. shows that majority of the cases (n= 50, 92.6%) were diagnosed as endometrium adenocarcinoma, followed by cases diagnosed as endometrial hyperplasia (n= 3, 3.7%). Endometrial sarcoma cases represented (n=1, 1.9 %) and fibroid (n=1, 1.9%). Table 3. illustrates that a higher proportion of cases aged between 51 - 60 years and less (n=25, 50%) compared to (n=14, 28%) among cases aged between 61 - 70 years and >70 had endometrial adenocarcinoma, while the cases aged 50 and less had low proportion (n=5, 10%).

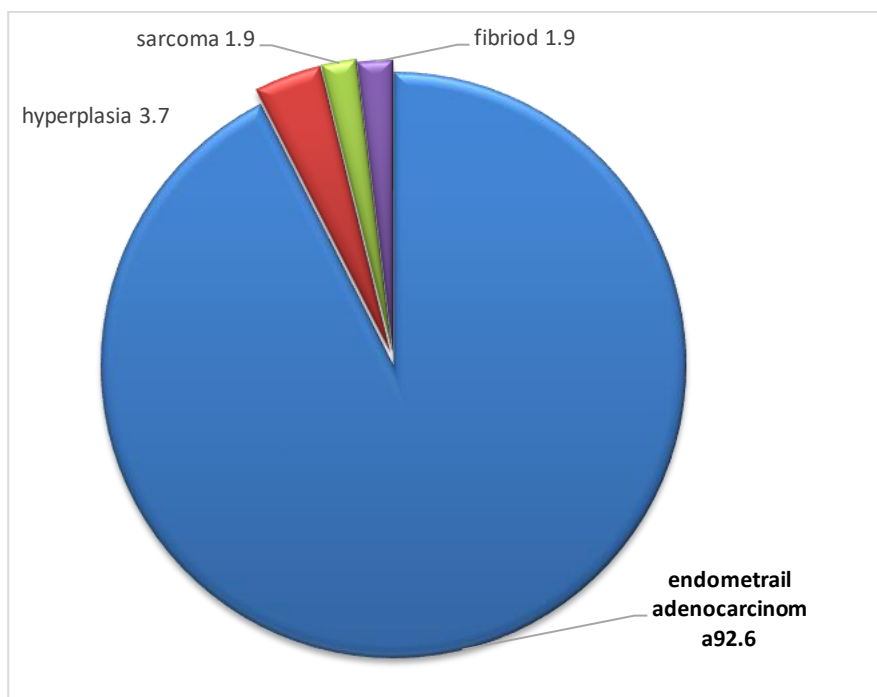


Figure 2. Distributions of type of histopathological finding

Table 3. Showing the relationship between age categories and histopathological finding of endometrial adenocarcinoma.

| Age categories | Endometrium adenocarcinoma | |
|----------------|----------------------------|----------|
| | No | percent% |
| 45-50 | 5 | 10% |
| 51-60 | 25 | 50% |
| 61-70 | 14 | 28% |
| >70 | 6 | 12% |

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Figure 3. illustrates that the highest frequency of diagnosed endometrial adenocarcinoma cases was during the year 2020 (n=19, 38.0%), followed by the years 2019 and 2021 where (n=18, 36.0%, n=13, 26.0%) of cases were diagnosed respectively.

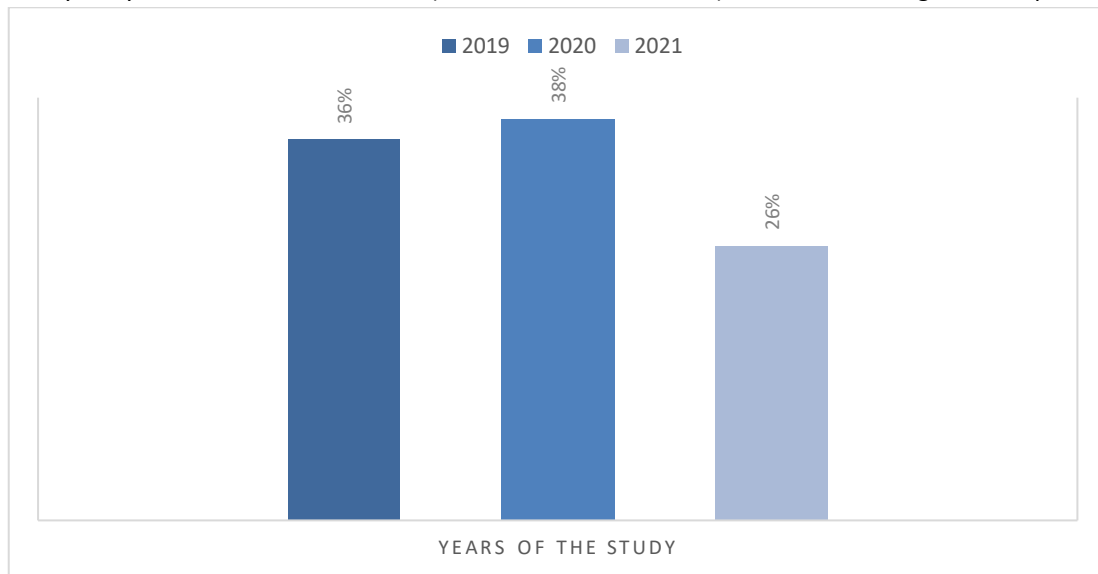


Figure.3 distribution of endometrial adenocarcinoma according to year of diagnosis

Figure 4. shows that (n=38, 76%) of endometrial adenocarcinoma cases had postmenopausal bleeding, while (n=12, 24 %) had no bleeding symptom.

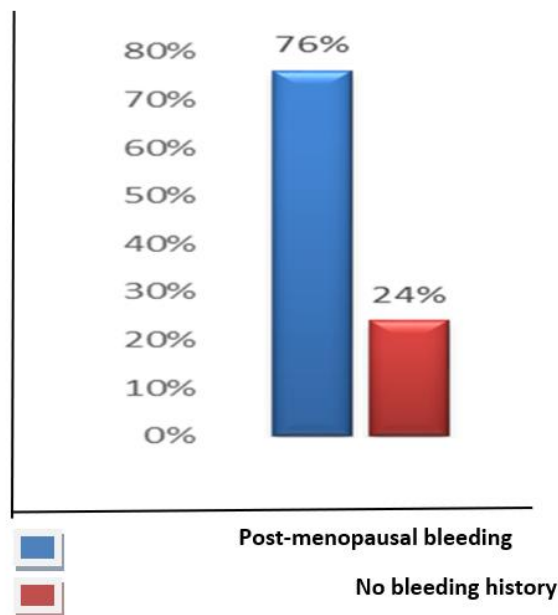


Figure.4 Distribution of endometrial adenocarcinoma cases according to the patient's symptoms.

Figure 5 reveals that the stages of the majority of the endometrial adenocarcinoma cases (n= 25, 50%) were stage I and (n= 11, 22%) of the cases were diagnosed at stage II and (n= 5, 10%) were at stage III and only (n=1, 2% at stage IV and about) n=8, 16% were unknown.

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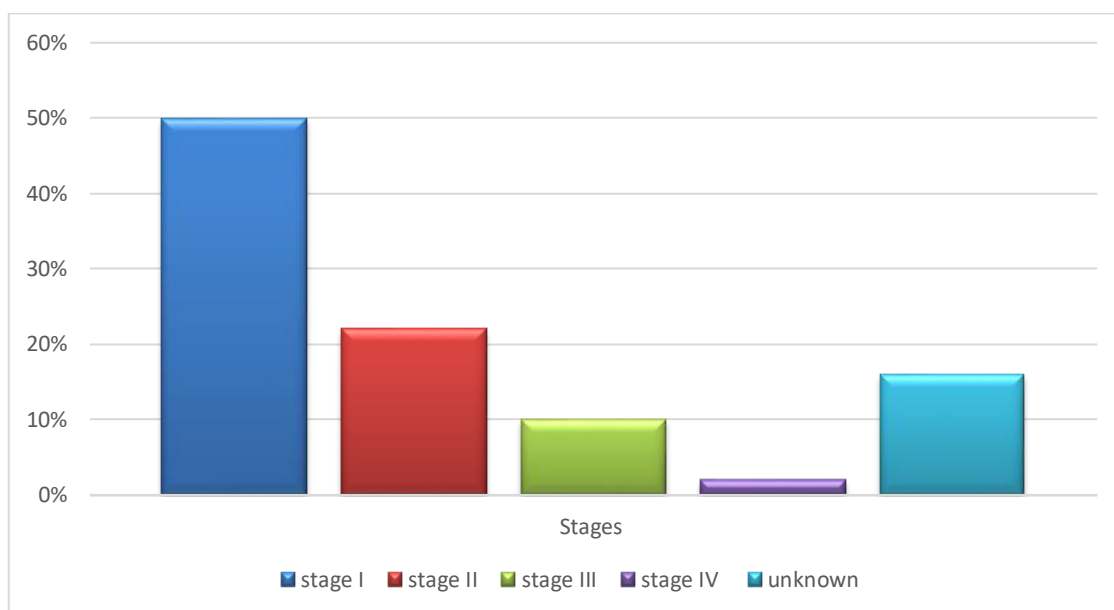


Figure 5: Distribution of endometrial adenocarcinoma cases according to Stages.

Table 4 reveals that (45%) and (36%) of cases aged 51 years and above had stage II and Stage I respectively, equal proportions of cases (50%) aged 51 years and above and 61 years and above had stage III. This difference was not statistically significant, and all the cases (100%) at age 61 and above had stage IV.

Table 4. Relationship between age categories of endometrial adenocarcinoma cases and their stages

| Age categories | Endometrial adenocarcinoma stages | | | | | | | |
|----------------|-----------------------------------|-----|----------|-----|-----------|-----|----------|------|
| | Stage I | | Stage II | | Stage III | | Stage IV | |
| | NO | % | NO | % | NO | % | NO | % |
| 45-50 | 4 | 16% | 0 | 0% | 1 | 20% | 0 | 0% |
| 51-60 | 9 | 36% | 5 | 45% | 2 | 40% | 0 | 0% |
| 61-70 | 7 | 28% | 4 | 36% | 2 | 40% | 1 | 100% |
| 70< | 5 | 20% | 2 | 18% | 0 | 0% | 0 | 0% |

DISCUSSION

Postmenopausal bleeding is a common complaint of postmenopausal women. The present study revealed that the incidence of PMB was common in the 5th to 6th decades of life. However, other studies (7) (8) showed a different range, they reported that the incidence of PMB is common in the 5th to 7th decades. Furthermore, earlier study (9) reported that the incidence of postmenopausal bleeding decreases with increasing age and this trend was similar in our study. This might be due to less sample size for histopathological diagnosis.

It is evidence-based that PMB is associated with diabetes, hypertension and obesity and these are independent risk factors for endometrial carcinoma (9). In this study only 5.6% subjected were hypertensive and 9.3% were diabetetic. However, Rekha et al (10) found that 50% of PMB patients had multiple medical disorders, like diabetes and hypertension. Furthermore, obesity and hormone replacement therapy is the commonest cause/risk factor of PMB and it is commonly used by affluent society. However, in this study there was limitations in patient' file regarding these data.

Kothapally et al (11) study showed that most of PMB patients were multiparous, which is consistent with our observation. In comparison other study (12) revealed that more than 70% of the cases were nulliparous at diagnosis, this may be explained by the fact that in the current era women delay their childbearing. Postmenopausal bleeding is more likely to be caused by pathologic disease than bleeding in younger women. The common histopathological picture of endometrium in this study was endometrial adenocarcinoma, next common was hyperplasia, with 1 patient were diagnosed as fibriod and 1 patient with endometrial sarcoma. In the present study 55 patients (92.6%) had endometrial adenocarcinoma this is dissimilar with numerous studies, Gredmark et al (13) that reported 44 patients only (18%) had malignancy and with earlier studies (14) found endometrial carcinoma in 9.5% out of 629 PMB cases.

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The endometrial malignancy is more common in postmenopausal age. The peak incidence of malignancy was observed in this study was between the age group of 51-60 years similar to a result that has been previously reported (15).

In this study, most of the cases were in stage I)50% and stage II)22 (% , this is similar to other observations (12) (16) which found that the majority of endometrial cancers are diagnosed at early stage (80% in stage I). By considering International Federation of Gynecology and Obstetrics defined grades 1 and 2 tumors as “low grade” and grade 3 tumors as “high grade, Type I endometrial carcinoma has a favorable outcome due to minimal myometrium invasion (17).

Endometrial hyperplasia (3.7%) were the other frequent causes of PMB in this study. These results are similar to those found by Bafna et al (18) where endometrial hyperplasia constituted one of the causes of postmenopausal bleeding. While another study (14) found endometrial hyperplasia is the main Cause of PMB. Whereas endometrial sarcoma has been reported to be less detectable by screening and this was in agreement with our study.

Conclusion:

The postmenopausal bleeding is an important symptom and requires careful and timely assessment to eliminate the possibility of malignancy as soon as possible. In this study found that endometrial adenocarcinoma cases were more common in relatively middle-aged women and was grade I endometrial carcinoma, the majority of cases presented with bleeding per vagina so the prognosis for endometrial carcinoma is usually good as most patients present with early stage disease due to the early symptom of postmenopausal bleeding.

LIMITATIONS

Due to retrospective, the taken data from patients' files, relatively less number of cases and less information in file about risk factor like hormonal therapy and BMI.

Recommendation:

Postmenopausal bleeding should always be investigated, as more than 50% of patients will have endometrial carcinoma. Active screening programs in Libya is essential to screen, control and prevent endometrial adenocarcinoma among women and to predicting the cases at early stages, also Public health education, including awareness of women about PMB as a serious sign of cancer.

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