MAK HILL Publications Research Journal of Medical Sciences

Research Article
doi: 10.59218/makrjms.2023.12.122.126

Evaluation of the Histopathological Spectrum among Women with Post-Menopausal Bleeding - A Cross-sectional Study

[1]Himani Rai, [2]Nazir Ahmad Var, [3]Sarika Rawat and [4]Vaishali Gurwani

[1]Department of Oncopathology, HBCH, MPMMCC, Varanasi, Uttar Pradesh, India
[2]Department of Microbiology, Government Medical College, Doda, Jamu and Kashmir, India
[3]Department of Obstetrics and gynecology, Dr. L. N. Pandey, Government Medical College, Ratlam, Madhya Pradesh, India
[4]Indira IVF Infertility Clinic, Bhopal, Madhya Pradesh, India

ABSTRACT

Post menopausal bleeding (PMB) as a major and serious alarming genital pathologies among post-menopausal women. Histopathological evaluations of all PMB cases were necessary for the diagnosis of malignant endometrial lesions. This study was evaluates the Histopathological finding of postmenopausal bleeding cases to rule out the benign and malignant endometrial lesions. This cross sectional observational study was conducted in the Department of Pathology with collaboration of department of gynecology. Total of 150 PMB patients were enrolled. The specimens were collected from the endometrial curetting and cervical biopsies. All specimens are processed and histopathological examination was done. Final diagnosis of the lesions was made on the basis of histopathological findings. Out of 150 post-menopausal bleeding cases, Majority of them (38%) were 41-50 years age group, mean age was 53.6 years. Cervical biopsy was most common biopsy received (42%). The maximum incidence (50%) of PMB was in grand multiparous patients (parity 4-6). Benign cases were 52% and malignant cases were 39.3%. Among benign cases the most common cause was atrophic endometrium (36.7%). Among malignant cases, endometrial hyperplasia was the most common cause (11.3%). Proper and timely evaluation of postmenopausal bleeding by histopathological examination is crucial to rule out malignant endometrial lesions which save the patient's life.

OPEN ACCESS

Key Words
Postmenopausal bleeding, histopathology, benign lesions, malignant lesions

Corresponding Author
Vaishali Gurwani,
Indira IVF infertility clinic, Bhopal, Madhya Pradesh, India
vaishaligurwani@gmail.com

Author Designation
[1]Fellow
[2-3]Assistant Professor
[4]Consultant Obstetrician and IVF Specialist

Received: 3 October 2023
Accepted: 19 October 2023
Published: 20 October 2023

Citation: Himani Rai, Nazir Ahmad Var, Sarika Rawat and Vaishali Gurwani, 2023. Evaluation of the Histopathological Spectrum Among Women with Post-Menopausal Bleeding - A Cross-Sectional Study. Res. J. Med. Sci., 17: 122-126, doi: 10.59218/makrjms.2023.12.122.126

INTRODUCTION

Menopause is defined as the established cessation of menses resulting in permanent amenorrhoea succeeds by the loss of ovarian follicular activity a minimum of 12 months amenorrhoea was necessary for the confirmation of menopause setting and diagnosed retrospectively[1-2]. Abnormal uterine bleeding (AUB) may be defined as the bleeding pattern that differs in frequency, duration and amount from a pattern observed during a normal menstrual cycle or after menopause[3]. Approximately 33% of gynecology OPD patients were suffering for Post-menopausal bleeding (PMB). Most of the PMB (70%) have harmless (benign) cause of bleeding and 30% cases were associated with malignancy[4-5]. Various patterns of abnormal uterine bleeding were reported like, metrorrhagia, menorrhagia, dysfunctional uterine bleeding, menometrorrhagia and postmenopausal bleeding (PMB)[6]. Northern Indian woman have lesser mean age of menopause (46.2 years) as compared to their Western counter parts (51 years)[7]. PMB constitutes major part of the gynaecological disorders among post-menopausal women. Indian cancer registry, reported raising trends of uterine malignancies in last two decades[8]. Aetiology of the PMB includes benign and malignant causes, benign are-cyclical endometrium and abnormal physiological changes of endometrium (disordered proliferative and atrophic endometrium) whereas among malignant lesions: endometrial hyperplasia, carcinomas, uterine polyp and pregnancy related complications were common[9]. Although most of the postmenopausal bleeding cases are often associated with benign pathology the possibility of having an underline malignancy makes it a sinister complaint requiring thorough clinical work-up. Evidence has shown that early detection of cervical and endometrial cancer improves the cure rate and reduces mortality[10]. Approx 90% of the endometrial cancer patients represent with postmenopausal bleeding, whereas only 10% of postmenopausal bleeding cases diagnosed as endometrial cancer[11]. Histopathological examination of PMB cases by endometrial biopsies specimens is a gold standard diagnostic method. The specific diagnosis of the endometrial lesions may helps for gynecologist to plan successful therapy and resourceful management of PMB[12].

Aims and objectives: The objectives of the present study were to know the aetiology of postmenopausal bleeding cases on the basis of histopathological findings in our hospital.

MATERIALS AND METHODS

This cross sectional observational study was carried out in the department of Pathology in collaboration with department of obstetrics and gynecology in central India. All the women of post-menopausal bleeding attending out patients department during the study period were enrolled in current study.

Specimens were collected from cervical, endometrial and vulval biopsies and immediately sent to Department of Pathology for the histopathological examination for all the suspected cases of PMB.

Inclusion criteria:

- Post-menopausal women complaint of bleeding
- Age equal to or more than 40 years
- Patients who gave written informed consent for the study

Exclusion criteria:

- Women aged <40 years
- Menopause were premature whether natural or surgical
- Women whom on hormone replacement therapy
- Premature ovarian failure
- Patients who not willing for the study

Data were collected, general history/menstrual history, socio-demographic characteristics such and clinical manifestations were recorded. Clinical and local examination of genital areas was done and cervical biopsy specimens were taken in the same sitting from the obvious growth on cervix. Abdominal ultrasonography (USG) was performed from all PMB women. Relevant blood investigations were performed.

Firstly gross examination of all the specimens was done, than specimens fixed with 10% buffered formalin. Cut sections of specimens were processed on the clean glass slides, stained with Hematoxylin and Eosin (H and E) and all Slides are examined under the oil immersion microscopic field. Final diagnosis was made on the basis of smear observation.

Statistical analysis: Analysis of data was done by using statistical package for social science (SPSS version 22) mean and percentage value were calculated. A $p<0.05$ was considered statistically significant.

RESULTS

Total 150 cases of postmenopausal bleeding were selected and analysed in the present study. Age ranged of PMB patients between 41-80 years with the mean age of 53.6 years. The majority of the cases 57 (38%) were 41-50 years age group followed by (32.7%) 51-60 years age group. Duration of post-menopausal bleeding was <1 year in most (52.7%) of the women in our study duration of menopause increases the incidence of postmenopausal bleeding decreases. The PMB were maximum (50%) in grand multiparous patients (parity 4-6). Details shown in Table 1.

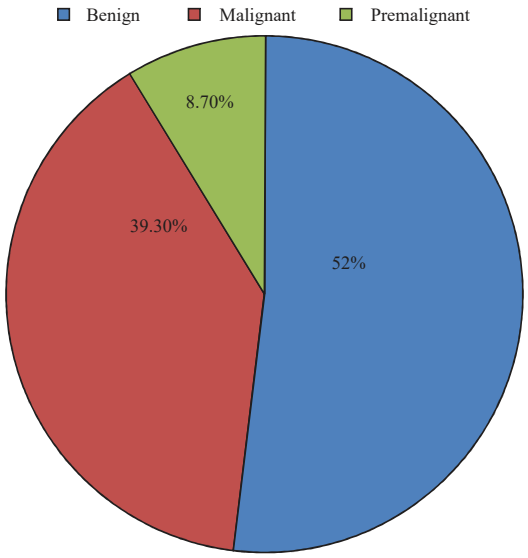

Fig. 1: Distribution of lesions among the study participants

Table 1: Distribution of study subjects according to socio-demographic characteristics

Socio-demographic variables	Frequency	Percentage
Age group (years)		
41-50	57	38
51-60	49	32.7
61-70	35	23.3
>70	9	6
Duration of complaint		
<1 year	79	52.7
1-5 years	53	35.3
>5 years	18	12
Duration of menopause		
1-5 years	61	40.6
6-10 years	56	37.4
>10 years	33	22
Parity		
Parity <3	63	42
Parity 4-6	75	50
Parity >6	12	8

Table 2: Type of specimens received from the women

Type of specimen	**Numbers**	**Percentage**
Biopsy vulva and vagina	5	3.3
Biopsy cervix	63	42
Biopsy cervix and endometrium	15	10
Endometrial curettage	46	30.7
Hysterectomy	7	4.7
Hysterectomy with adnexa	12	8
Hysterectomy with adnexa, omentum ad lymph nodesn	2	1.3

Table 3: Distribution of histopathological nding in post-menopausal bleeding cases

Histopathology diagnosis	Number	Percentage
Functional causes		
Atrophic Endometrium	55	36.7
Proliferative Endometrium	30	20
Secretory Endometrium	12	8
Disordered Proliferative Endometrium	8	5.3
Organic causes		
Endometritis	6	4
Endometrial Polyp	4	2.7
Endometrial Hyperplasia	17	11.3
Carcinoma in situ of cervix	3	2
Endometrial Hyperplasia with Atypia	3	2
Endometrial Carcinoma	6	4
Inadequate	6	4

Cervix was the most common site of biopsy (42%) followed by endometrial curettage (30.7%). Details of site of biopsy shown in Table 2.

Postmenopausal bleeding was due to benign causes in 52% malignant causes in 39.3% and rest were premalignant in 8.7% cases Fig. 1.

On the basis of histopathology findings endometrial lesions were categorized into Functional and Organic group. Out of total cases, most of the cases (70%) were functional while only 26% were found to have organic lesions. Atrophic endometrium (36.7%) followed by Proliferative endometrium (20%) were the common among functional lesion whereas, endometrial hyperplasia (11.7%) was common among organic lesions.

DISCUSSIONS

Post-menopausal bleeding is major genital issue in older women that can be associated with the endometrial malignancy. Considering the gravidity signicant pathologies as a cause of PMB all patients should be prioritized for early detection, follow up and prompt management. In present era life expectancy of women has increased, tend to live with longer postmenopausal phase.

In our study, the age ranged between 41-80 years. Highest number of cases i.e, 38% were in 41-50 years of age group, mean age was 53.6 years, similar results were obtained by many other studies Lidor *et al*.[13]and Sousa *et al.*[14], reported age ranged was 40-81 years and 43-82 years respectively. Ubeja *et al.*[15] and Yousuf *et al.*[16] reported the mean age of PMB was 54.51 years and 56.3 years respectively.

In the present study, majority of the PMB women was 41-50 years, consistent to Najam *et al*.[17] and Doraiswami *et al.*[18].

The incidence of postmenopausal bleeding decreased with increasing age of women, indicating that frequency of PMB was inversely proportional to age.

The maximum incidence (50%) of post-menopausal bleeding was in grand multiparous women (parity 4-6) observed in current study, accordance to Kumari *et al*.[19].

In this present study majority of the biopsy specimens were received from cervix followed by endometrial curettage, our findings correlate with the Vidya *et al*.[20].

Current study found, duration of menopause were 1-5 years in most of the patients, i.e.,40.6%, reported that incidence of PMB was decreased with duration of menopause increases, our results is concordance to the Agrawal *et al*.[21].

The common risk factors of the PMB were hypertension, obesity and diabetes observed in a study

conducted by Nirupama *et al*.[21]. A study done by Syeda *et al*.[23], reported that obesity was the most common (72.7%) medical co-morbidity associated with the endometrial carcinoma patients in PMB.

In overall PMB patients, benign lesions were most common, found in 52% cases and malignant lesions in 39.3% in current study, in agreement with the Khatik *et al*.[24].

Our study observed most of the PMB cases (70%) showed functional changes of endometrium and only 26% cases shows organic lesions, comparable with the other researchers, Sonia Gon *et al*.[25] and Menapara *et al*.[26], reported functional lesions in 80.1% and 82% respectively. The reported observations were indicates that the organic causes are very less as compared to functional but it is compulsory to rule the organic cases for giving any particular treatment.

Current study was noted that atrophic endometrium is the commonest among histopathological lesion in benign conditions, followed by proliferative endometrium, similar results are obtained by Reyaz *et al*.[27], Karmarkar, *et al.*[28] and Kothapally *et al*.[29]. The probable cause of PMB from atrophic endometrium are alteration of serum estrogen levels, degeneration of myometrial arterioles, chronic nonspecific endometritis, associated co morbidities like diabetes mellitus and hypertension, rupture of endometrial cysts and uterus prolapsed.

Endometrial hyperplasia constitutes the commonest Histopathological organic lesion for postmenopausal bleeding, correlate with the many other studies, Ahmed *et al*.[30] and Damle, *et al*.[31]. Endometrial hyperplasia is a most common predisposing factor and significant Histopathological condition that can lead to development of endometrial carcinoma.

Endometrial carcinoma is the most serious malignant lesion that can leads to postmenopausal bleeding, present study reported only 4% cases, similar to the study conducted by Sreelatha *et al.*[32], whereas much higher incidence of Carcinoma Endometrium were reported by Cheema *et al*.[33] and Mallick *et al.* [33]. This may be due to high parity in our population as endometrial carcinoma is more common in nulligravida. Endometrial carcinoma is more associated with advancing age, late menopause thus this correlates with our study.

CONCLUSION

Postmenopausal bleeding is a major challenging gynecological issue that can alarms some underlying pathology. Accurate diagnosis of PMC cases was made by Histopathological examination. Functional as well as organic lesions of endometrium lead to this problem. Atrophic endometrium and endometrial hyperplasia was the commonest causes of PMB. A proper early diagnosis of PMB is immensely important for prompt tratment of patient by implementing a proper management plan can lead to reduces women mortality.

REFERENCES

1. Padubidri, V.G. and S.N. Daftary, 2015. Shaw's Textbook of Gynecology E-Book. 16Ed Edn., Elsevier Health Sciences,, New Delhi, ISBN-11: 8131238725,, Pages: 596.
2. WHO., 1996. Research on the menopause in the 1990s. Report of a WHO scientific group. World Health Organ Tech Rep Ser, https://pubmed.ncbi.nlm.nih.gov/8942292/.
3. Zeeba, S., S. Jairajpuri and S. Rana, 2013. Atypical uterine bleeding histopathological audit of endometrium a study of 638 cases. Al. Ameen. J. Med. Sci., 6: 21-28.
4. ACOG., 2000. ACOG practice bulletin: Management of anovulatory bleeding., https://pubmed.ncbi.nlm.nih.gov/11296797/
5. Rossouw, J.E., G.L. Anderson, R.L. Prentice, A.Z. LaCroix and C. Kopperberg et al ., 2002. Risks and benefits of estrogen plus progestin in healthy postmenopausal women: Principal results From the Women's Health Initiative randomized controlled trial. JAMA., 288: 321-322.
6. Fraser, I.S., H.O. Critchley and M.G. Munro, 2007. Abnormal uterine bleeding: Getting our terminology straight. Curr. Opin. Obstet. Gynecol., 19: 591-595.
7. Ahuja, M., 2016. Age of menopause and determinants of menopause age: A pan India survey by ims. J. Mid-life Health, 7: 126-131.
8. Takkar, N., P. Goel, D. Dua, H. Mohan, A. Huria, A. Sehgal, 2010. Spectrum of gynaecological disorders in older Indian women: A hospital based study. Asian. J. Gerontol. Geriatr., 5: 69-73.
9. Brandon, J.B., E.H. Amy, C.L. Nicholas, E.F. Harold, E. W. Edward, 2002. The John Hopkin's Manual of Gynecology and Obstetrics. 2Ed Edn., Lippincott Williams and Wilkins, ISBN-10: 1451148011, Pages: 688.
10. Sur, D. and R. Chakravorty, 2016. Correlation of endometrial thickness and histopathology in women with abnormal uterine bleeding. Reprod. Syst. Sexual Disord., Vol. 5.10.4172/2161-038x.1000192.
11. Wong, S.F., K.L. Luk and A.Y.K. Wong, 2001. Findings in women with postmenopausal bleeding investigated with hysteroscopy. J. Obstet. Gynaecol., 21: 392-395.
12. Parmar, J. and D. Desai, 2013. Study of endometrial pathology in abnormal uterine bleeding. Int. J. Reprod., Contraception, Obstet. Gynecol., 2: 182-185.

13. (Baruch) Lidor, A., B. Ismajovich, E. Confino and M.P. David, 1986. Histopathological findings in 226 women with post-menopausal uterine bleeding. Acta. Obstetricia. Gynecologica. Scand., 65: 41-43
14. Sousa, R., M. Silvestre, L. A. E. Sousa, F. Falcão, I. Dias, T. Silva, C.D. Oliveira and H.M. Oliveira, 2001. Transvaginal ultrasonography and hysteroscopy in postmenopausal bleeding: a prospective study. Acta. Obstet. Gynecol. Scand., 80: 856-862.
15. Begum, J. and R. Samal, 2019. A clinicopathological evaluation of postmenopausal bleeding and its correlation with risk factors for developing endometrial hyperplAsia and cancer: A hospital-based prospective study. J. Mid. life Health., 10: 179-183.
16. Yousuf, S., M. Shaheen and T. Rana, 2010. Frequency of endometrial carcinoma in patients with postmenopausal bleeding. Annals., 16: 290-294.
17. Moizah, N., M. Bharathi, 2019. Histopathological study of endometrial biopsies in women presenting with abnormal uterine bleeding, JMSCR., 7: 104-107.
18. Doraiswami, S., T. Johnson, S. Rao, A. Rajkumar, J. Vijayaraghavan and V. K. Panicker, 2011. Study of endometrial pathology in abnormal uterine bleeding. J. Obstet. Gynecol. India, 61: 426-430.
19. Kumari, A., S. Pankaj, V. Choudhary, J. Kumari and S. Nazneen et al., 2018. Ultrasonic and histopathological evaluation to exclude premalignant and malignant lesions in perimenopausal and postmenopausal women presenting as abnormal uterine bleeding. J. Obstet. Gynecol. India., 69: 171-176.
20. Vidya, V., S. Geetha, K. Rejani and M. Bharthi, 2018. Histopathological spectrum of lesions in women with postmenopausal bleeding. Indian. J. Pathol. Oncol., 5: 326-331.
21. Agrawal, L. and S. Fusey., 1997. Role of vaginal scan ofor endometrial thickness in postmenopausal bleeding. M. D. obs gynae. Nagpur university, Nagpur.
22. Nirupama, V., Y. Suneetha, K.P. Devi, 2015. Postmenopausal bleeding: An analytic study of 100 cases. Int. J. Sci. Res., 4: 2588-259.
23. Fatima, S.S., J.M. Naib, Z. Sharafat and T. Mazhar, 2014. Postmenopausal bleeding-an alarming symptom of endometrial carcinoma. J. Med. Sci., Vol. 22.
24. Khatik, N., A. Tiwari and K. Yadav, 2020. Histopathological evaluation of endometrium and its clinical correlation in patients of abnormal uterine bleeding. Int. J. Reprod., Contraception, Obstet. Gynecol., 9: 4169-4174.
25. Gon, D.S., D.T. Kundu, D.D. Mallick and D.G. Ghosh, 2016. A study on histopathological patterns of endometrium in different types of abnormal uterine bleeding among peri and postmenopausal women. IOSR J. Dent. Med. Sci., 15: 106-111.
26. Menapara, C.B. and K.N. Desai, 2020. Histopathological evaluation of endometrium in postmenopausal bleeding. IP Arch. Cytol. Histopathol. Res., 3: 201-205.
27. Reyaz, M. and N. Nandi, 2023. Histopathological spectrum of lesions in evaluating the women with postmenopausal bleeding. Indian J. Obstet. Gynecol. Res., 10: 285-288.
28. Pragati, J., Karmarkar, A. Wilkinson and M. Rathod, 2014. Histopathological evaluation of postmenopausal bleeding. IOSR. J. Dental. Med. Sci. IOSR. JDMS., 13: 53-57.
29. Kothapally, K. and U. Bhashyakarla, 2013. Postmenopausal bleeding: Clicopathological Study in a teaching hospital of andhra pradesh. Int. J. Reprod. Contracept. Obstect. Gynecol., 2: 344-348.
30. Ahmed, J. A., 2007. Clinico pathological evaluation of postmenopausal uterine bleeding in mosul city. Tikrit. Med. J., 13: 73-78.
31. Damle, R.P., 2013. Clinicopathological spectrum of endometrial changes in peri-menopausal and post-menopausal abnormal uterine bleeding: A 2 years study. J. Clin. Diagn. Res., 7: 2774-2776.
32. Sreelatha, S., S. P. Jayanthi, C. Shivananjaiah, P. Malapure and H. N. Nataraja, 2017. Postmenopausal bleeding and its evaluation: Prospective study in a tertiary care center. Int. J. Clin. Obstet. Gynecol., 1: 48-51.
33. Cheema, S. Z., M. Ikram, R. Saeed and M. Saeed, 2008. Post menopausal bleeding. Professional. Med. J., 15: 328-334.
34. Mallick, A., R. Behera and K. Subudhi, 2013. Histopathological study of endometrium in postmenopausal bleeding. J. Evol. Med. Dent. sci., 2: 9010-9018.