*IOSR Journal of Dental and Medical Sciences (IOSR-JDMS)*
*e-ISSN: 2279-0853, p-ISSN: 2279-0861.Volume 17, Issue 4 Ver. 12 (April. 2018), PP 17-20*
*www.iosrjournals.org*

# Study of Endometrial Histopathology in Woman with Postmenopausal Bleeding

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***Abstract***
*Objective: To establish the various endometrial causes of postmenopausal bleeding, through histopathological evaluation and to correlate the clinical and histopathological finding.*
*Study Design: Prospective observational.*
*Place and Duration of Study: The Dept of Pathology; V.S.S Medical college and Hospital, Burla, Sambalpur, 2 years duration.*
*Methodology: A total of 105 consecutive hysterectomy specimens, endometrial biopsies and curettage samples specimens with history of postmenopausal bleeding were included. After microscopic examination, frequencies of histological findings in different age groups were generated. Chi-square and independent sample t-tests were applied to see whether the difference was significant which was set at $p < 0.05$.*
*Results: Eighty two (78.10%) specimens showed benign pathologies while 19 (18.10%) were malignant. In 4 cases (3.8%) no cause for PMB was found. Endometrial hyperplasia was seen in 23 (21.9%) cases followed by endometrial polyp in 21 (20.0%). Endometrial carcinoma was found in 18 cases (17.5%). A highly significant increase in the percentage of malignant and pre-malignant lesions was seen with increasing age group ($p < 0.001$).*
*Conclusion: Although benign endometrial pathologies were more common in postmenopausal bleeding but the collective proportion of endometrial malignancies was quite significant. Therefore, PMB should be urgently evaluated for cause and early commencement of treatment.*
***Key Words:*** *Postmenopausal Bleeding, Endometrial polyp.*

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Date of Submission: 04-04-2018 Date of acceptance: 19-04-2018

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## I. Introduction

Menopause is derived from Greek men (month) and pauos (to stop). WHO has defined menopause as the permanent cessation of menstruation resulting from the loss of ovarian follicular activity, thus it is an important phase for dramatic hormone and other changes in lifespan of a woman[1].

Post menopausal bleeding is bleeding from the reproductive system that occurs one year or more after menstrual periods have stopped. Bleeding from the genital tract occurring after the menopause is much more sinister than premenopausal bleeding. Even without amenorrhoea or irregularity, menstruation continuing after the age of 55 years should be investigated.[2]

In the absence of hormone therapy; any bleeding after menopause should prompt evaluation with endometrial sampling. Organic pathology causing uterine bleeding in postmenopausal women includes endometrial polyps, endometrial hyperplasia and endometrial carcinoma. More often than not, an organic cause is not identifiable and the histopathology may show atrophic endometrium, proliferative endometrium and rarely secretory endometrium.[3]

The most commonly recovered endometrial biopsy sample from women with postmenopausal bleeding is atrophic endometrium. About 5% of women with postmenopausal bleeding have endometrial hyperplasia characterized by simple, complex or atypical hyperplasias. Postmenopausal hyperplasia carries a stronger threat of cancer than does premenopausal hyperplasia.[4]

At least 1/4th of postmenopausal women with bleeding is said to have a neoplastic lesion; approximately 15% of which is having endometrial carcinoma[3].The carcinoma of endometrium is the most common female pelvic malignancy and the fourth most common cancer in females after breast, lung and colorectal malignancies.[5] The relatively low mortality for this cancer is probably due to the fact that most of these patients turn up for consultation at an early stage with symptoms of postmenopausal bleeding. The recent

rise in the incidence of endometrial carcinoma may be related to the decreased incidence of cervical carcinoma; prolonged life expectancy and earlier diagnosis.[6]

The study of endometrial histopathology in woman with postmenopausal bleeding will help us to find out the different causes of postmenopausal bleeding and to guide for proper treatment protocol for those factors.

## II. Methodology

It was a prospective study on histopathology of endometrium in postmenopausal bleeding, undertaken in the department of pathology over a period of two years (July 2011 - June 2013). Material for the study consisted of hysterectomy specimens, endometrial biopsies and curettage samples from women with postmenopausal bleeding which were sent for histopathological examination to the Department of Pathology, V.S.S MEDICAL COLLEGE, Burla, Sambalpur. Biopsy samples were fixed in 10 % formalin and routine processing was done. Paraffin block was stained with H&E.The Inclusion criteria was those specimens from patients with postmenopausal bleeding who had hysterectomy, endometrial biopsy or dilatation and curettage done and the Exclusion criteria was those cases with non endometrial causes of postmenopausal bleeding & hysterectomy specimens and endometrial biopsies from patients without complaints of postmenopausal bleeding.

## III. Results

Out of 105 cases of, postmenopausal bleeding presented at a mean age of 51.72 years and was most common in age group 45-55 years.There was a declining incidence of postmenopausal bleeding with increasing agew. Among the endometrial causes of postmenopausal bleeding, 78.10 % were due to benign conditions, 18.10% were due to malignancy and in 3.8% of cases no diagnostic material was detected. Endometrial hyperplasia was most common among the benign causes followed by endometrial polyp.Endometrial endometroid adenocarcinoma was a major finding among the malignant causes. Among the less common were poorly differentiated carcinoma, carcinosarcoma and undifferentiated carcinoma followed by squamous cell carcinoma of endometrium.

**ENDOMETRIAL HISTOPATHOLOGY IN RELATION TO POSTMENOPAUSAL BLEEDING**

| | ENDOMETRIAL HISTOPATHOLOGY | NO. OF CASES | PERCENTAGE |
|---|---|---|---|
| 1 | Hyperplasia | 23 | 21.9 |
| 2 | Atrophic endometrium | 7 | 6.66 |
| 3 | Polyp | 21 | 20.00 |
| 4 | Disordered proliferative endometrium | 3 | 2.86 |
| 5 | Proliferative endometrium | 20 | 19.05 |
| 6 | Secretory endometrium | 6 | 5.72 |
| 7 | Menstrual endometrium | 0 | 0 |
| 8 | Endometritis | 2 | 1.91 |
| 9 | Adenofibroma | 0 | 0 |
| 10 | Endometrial adenocarcinoma | 16 | 15.24 |
| 11 | Squamous cell carcinoma | 2 | 1.91 |
| 12 | Carcinosarcoma | 1 | 0.95 |
| 13 | Undifferentiated sarcoma | 0 | 0 |
| 14 | No tissue seen | 4 | 3.80 |
| | **Total** | 105 | 100 |

**INCIDENCE OF VARIOUS CAUSES OF POSTMENOPAUSAL BLEEDING**

| CAUSES | | NO. OF CASES | PERCENTAGE |
|---|---|---|---|
| BENIGN | Hyperplasia | 23 | 21.9 |
| | Endometrial polyp | 21 | 20.00 |
| | Adenofibroma | 0 | 0 |
| | Endometriosis | 2 | 1.91 |
| | **TOTAL** | **46** | **43.81** |
| MALIGNANT | Carcinoma | 18 | 17.15 |
| | Sarcoma | 0 | 0 |
| | Carcinosarcoma | 1 | 0.95 |
| | **TOTAL** | **19** | **18.10** |
| NON NEOPLASTIC | Atrophy | 7 | 6.66 |
| | Proliferative endometrium | 20 | 19.05 |
| | Disordered proliferative | 3 | 2.86 |
| | Secretory endometium | 6 | 5.72 |
| | Menstrual endometrium | 0 | 0 |
| | **TOTAL** | **35** | **34.29** |
| NO. CAUSE FOUND | | **4** | **3.80** |
| TOTAL NO. OF CASES | | **105** | **100** |

**TYPES OF ENDOMETRIAL HYPERPLASIA**

| TYPE 0F HYPERPLASIA | NO. OF CASES | PERCENTAGE % |
|---|---|---|
| Simple Hyperplasia | **11** | **47.83** |
| Complex Hyperplasia | 6 | **26.09** |
| Simple Atypical Hyperplasia | 2 | **8.7** |
| Complex Atypical Hyperplasia | 4 | **17.39** |
| **TOTAL** | **23** | **100%** |

**DISTRIBUTION OF HISTOLOGICAL SUBTYPES OF ENDOMETRIAL CARCINO A**

| Histological Subtypes | No. Of Cases | Percentage | Age(Mean) |
|---|---|---|---|
| Endometrioid type without squamous differentiation | 11 | 58% | 51.6 |
| Endometrioid type with squamous differentiation | 2 | 11% | 51.5 |
| Serous Papillary adenocarcinoma | 3 | 16% | 50.7 |
| Carcinosarcoma | 1 | 5% | 45 |
| Squamous cell carcinoma | 2 | 11% | 55 |
| Undifferentiated carcinoma | 0 | 0% | 0 |
| TOTAL | **19** | **100%** | 51.9 |

## IV. Discussion

Bleeding per vaginum following established menopause is called post menopausal bleeding. Postmenopausal bleeding is the most common presenting symptoms (75-80%). The significance of post menopausal bleeding whatever slight should not be under estimated. This study includes women presenting with an endometrial cause of uterine bleeding after menopause attending outpatient department of Obstetrics and Gynaecology, V.S.S medical college & Hospital, Burla.

**TABLE 27 -** HISTOPATHOLOGY OF ENDOMETRIUM IN POSTMENOPAUSAL BLEEDING

| ENDOMETRIAL HISTOPATHLOGY | *J C PA CH EC O et al (1968)[7] n= 288* | *KINITIS G A et al (1982[8] n= 87* | *LIDOR A et al (1986)[9] n= 226* | *THOMAS GRED MA-RK et al (1995)[10] n= 442* | *ESCOFFERY CT et al (2002)[11] n=231* | *VEENA S NAIK et al (2005)[12] n= 53* | *J MILOSEVIC et al (2006)[13] n=153* | *N S DAWOOD et al (2010)[14] n=111* | *I. B-IRSHAID et al (2011)[15] n=457* | *M TAHMASEBI et al (2012)[16] n=98* | PRESENT STUDY (n= 105 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hyperplasia | - | 18.3% | 15% | 10.1% | 28% | 26.4 % | 13.7% | 12.61% | 11.38 | 10.75% | 21.9% |
| Atrophic | 27.7 % | 33.3% | 46% | 51.5% | 26.7% | 32% | 31.4% | 29.72% | 53.17% | 47.32% | 6.66% |
| Polyp | 32.3 % | 10.3% | 8% | 9.5% | - | 5.7% | 32.7% | 7.21% | 5.25% | 30.11% | 20.00% |
| Disordered prolif. Endo | - | - | - | - | - | - | - | 2.71% | - | - | 2.86% |

## V. Conclusion

Postmenopausal bleeding is a symptom not to be underestimated. Bleeding from the genital tract after menopause need prompt evaluation with endometrial sampling. The dictum is "**Postmenopausal bleeding indicates malignancy until proved otherwise**". The incidence of a malignant cause of postmenopausal bleeding increases as the time lapse between menopause and onset of bleeding increases.

Majority of the cases associated with postmenopausal bleeding were due to benign states of the endometrium namely hyperplasia, polyp, and proliferative endometrium. Hence study of endometrial histomorphology in PMB will help for appropriate therapeutic strategy.

Endometrial hyperplasia was a major cause of postmenopausal bleeding. Postmenopausal hyperplasia carries a stronger threat of cancer than does premenopausal hyperplasia.

Among the malignant causes, endometrial adenocarcinoma of endometrioid type was most frequent with a lower mean age at presentation.

High grade cancers like serous papillary adenocarcinoma and squamous cell carcinoma were also found but less frequently.

Uncommon malignancies like carcinosarcoma may also be encountered in postmenopausal women with bleedingAlthough the incidence of postmenopausal bleeding due to malignancy has fallen, it remains sufficiently high to require immediate and thorough investigation.

## References


[1] Research on the Menopause in the 1990s Report of a WHO Scientific Group.World Health Organisation, WHO Technical Report Series No. 866, 1996.

[2] Kumar P, Malhotra N. Menopause. In: Jeffcoat's principles of gynecology. 7th ed. Jaypee Brothers Medical Publishers (P) Ltd. 2008 .p.862.

[3] Adams HIllard PJ. Benign diseases of the female reproductive tract. In: Berek JS, Rinehart RD, Adashi EY editors. Berek and Novak's Gynecology. 15th ed. Lippincott Williams and Wilkins; 2007 .p.427.

[4] Hendrickson MR, Longacre TA, Kempson RL. The Uterine Corpus. In : Mills SE, Carter D, Greenson JK, Oberman HA, Reuter VE, Stoler MH, editors. Sternberg's Diagnostic Surgical Pathology. 4th ed. Vol.3, Philadelphia: Lippincott Williams; 2004 .p.2453.

[5] U.S. Cancer Statistics Working Group. United States Cancer Statistics: 1999–2014 Incidence and Mortality Web-based Report. Atlanta (GA): Department of Health and Human Services, Centers for Disease Control and Prevention, and National Cancer Institute; 2017. Available at: http://www.cdc.gov/uscs.

[6] Sean C. Dowdy, Andrea Mariani, John R. Lurain. In: Berek JS, Rinehart RD, Adashi EY editors. Berek and Novaks Gynecology. 15th ed. Lippincott Williams and Wilkins; 2007 .p.1250-1257.

[7] Jose C. Pacheco and Roger D. Kempers. Etiology of postmenopausal bleeding. Obstet & Gynecol 1968 July; 32(1):40-46.

[8] Kintis GA and Calvert W. Postmenopausal bleeding – one hospital – one year. J Obstet & Gynecol India 1982; 676-683.

[9] Lidor A, Ismajovich B, Confino E, David MP. Histopathological findings in 226 women with postmenopausal uterine bleeding. Acta Obstet Gynecol Scand 1986; 65:41-43.

[10] Thomas Gredmark, Sonja Kvint, Guillaume Havel, Lars Ake Mattsson. Histopathological findings in women with postmenopausal bleeding. Br J Obstet & Gynecol1995 Feb; 102:133-136.

[11] Escoffery CT, Blake GO, Sargeant LA. Histopathological findings in women with postmenopausal bleeding in Jamaica. West Indian Med J 2002 Dec; 51(4):232-5.

[12] Veena S. Naik, Jyoti D. Rege, Kusum D. Jashnani. Pathology of genital tract in post -menopausalbleeding.Bombay Hospital J www.bhj.org/journal/2005_4703_july/html.

[13] Jelena Milosevic, Biljana Djordjevic and Marija Tasic. Influence Of Menopausal Status On Frequency And Pathohistological Features Of Endometrial Hyperplasia And Carcinoma In Patients With Abnormal Uterine Bleeding. Acta Medica Medianae 2008, Vol.47.

[14] Nasira Sabiha Dawood, Kiran Peter, Faiza Ibrar, Asif Dawood. Postmenopausal Bleeding: Causes and Risk of Genital Tract Malignancy/2010J Ayub Med Coll Abbottabad; 22(2).

[15] I .Bani Irshaid and A Al-Sumadi. Histological findings in women with postmenopausal bleeding: Jordanian figures. Eastern Mediterranean Health Journal/2011; Vol.17 No.7.

[16] Morteza Tahmasebi, Maryam Imen, Taghi Razi. Comparing of the Results of Transvaginal Ultrasonography with Dilatation and Curettage Findings inEvaluation of Endometrial Cancer in Women with Postmenopausal Bleeding. J undisha pur Sci Med J . 2012; 11(3): 229-240


Kaushal Kumar "Study of Endometrial Histopathology in Woman with Postmenopausal Bleeding."IOSR Journal of Dental and Medical Sciences (IOSR-JDMS), vol. 17, no. 4, 2018, pp 17-21.