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Original Research Article

A comparative study between hysteroscopic findings and histopathology in cases of post-menopausal bleeding patients

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ABSTRACT

Background: Postmenopausal bleeding (PMB) is most common cause of gynecological visits. All with unexpected uterine bleeding should be evaluated for endometrial carcinoma. Although most cases in developing countries is due to atrophy. Aim of the study was to evaluate endometrial causes of postmenopausal bleeding with its correlation with hysteroscopy findings and endometrial tissue histopathology.
Methods: A total 74 consecutive cases of PMB over a period of 1½ year fulfilling the inclusion and exclusion criteria and giving informed consent were selected. Each patient was subjected to transvaginal sonography (TVS) for assessment of uterus, adnexa and endometrial thickness. Then they were scheduled for hysteroscopy and dilation and curettage. Endometrial sample was sent for histopathological examination (HPE).
Results: In our study, 48.65% of patients with postmenopausal bleeding where in age group menopause is 51-55 years. The TVS, hysteroscopy and histopathological findings were correlated in this study. On HPE 43.24% showed atrophic endometrium out of which maximum 93.93% were identified in hysteroscopy.
Conclusions: In women with PMB, hysteroscopy is the basic tool that allows precise diagnosis of various endouterine pathologies. The average sensitivity of hysteroscopy was 98% in our study and the specificity was 96.4%. Hence, we can conclude that it is highly accurate for evaluating endometrial pathologies.

Keywords: Postmenopausal bleeding, Endometrial carcinoma, Endometrial atrophy, Hysteroscopy, Histopathology

INTRODUCTION

Postmenopausal bleeding (PMB) is defined as bleeding that occurs from the genital tract after one year of amenorrhoea.[1] PMB is a common presenting complaint among menopausal women.[2] Although postmenopausal status is considered after 1 year but investigation should be started after 6 months if pervaginal bleeding happens.

Bleeding pv in post-menopausal women is an alarming symptom. There is an old saying that PMB is endometrial cancer until proven otherwise. It is estimated that postmenopausal women with vaginal bleeding have a probability of endometrial carcinoma of approximately 10%.[4] Endometrial cancer is the most common gynaecological cancer in developed countries and about 90-95% of patients diagnosed with endometrial cancer attend with abnormal uterine bleeding. In developing countries, the most common cause of PMB is endometrial atrophy.[3]

Dilatation and curettage (D and C) was the only tool available in the past for evaluating a case of PMB, but most of the focal lesions were missed on D and C.[6] With hysteroscopy, entire uterine cavity can be examined, and biopsies can be taken from suspicious areas.[8]

This made hysteroscopy a gold standard tool for visual assessment and examination of focal endometrial lesions.

METHODS

This was a prospective study of 1½ year from March 2022 to August 2024 of 74 patients who came for evaluation of postmenopausal bleeding at Apollo hospital Bilaspur (https://www.calculator.net/sample-size-calculator.html?type=1&cl=95&ci=5&pp=50&ps=90&x=Calculate). First history and examination was performed and patient was advised transvaginal ultrasound scan to determine the endometrial thickness and complete assessment of uterus, tubes, ovaries and adenexa. Although cervical pathology is not included in this study.

Inclusion criteria

The inclusion criteria include post-menopausal women who had their last menstrual period at least 1 year before and have complaint of bleeding pv or spotting pv.

Exclusion criteria

Exclusion criteria include known case of bleeding dyscrasis, surgical menopause, not giving consent for evaluation, known case of carcinoma (endometrium/cervix).

After taking consent patient subjected for hysteroscopy as a day-care procedure. Hysteroscopy involves a systematic assessment of the endometrial cavity and targeted biopsy if required. Identified endometrial pathologies are examined for contour, size, colour, visible vessel pattern, and endometrial glands. Hysteroscopy is said to be satisfactory if the entire uterine cavity and pathologies are well visualized. Endometrial biopsy specimen was sent for histologic examination.

Statistical analysis

Findings were entered in Microsoft excel 2013. Statistical analysis was carried out with the help of statistical package for social sciences (SPSS) (version 20).

RESULTS

Age distribution

The maximum Age group showing postmenopausal bleeding is between 51 to 55 years i.e. 48.65% in our study. In age group of 45 to 50 there are 15 patients, in 51 to 55 are 36 patients, in 55 to 60 are 16 patients and 61 and above are 7.

The maximum finding on TVS was normal study while pathologically we encountered fibroid uterus followed by hyperplasia (Table 1).

Hysteroscopy revealed 33 had atrophic endometrium. Endometrial polyp was seen in 21 patients. 20 patients had features suggestive of hyperplastic endometrium (Table 2).

Table 1: Distribution of study population based on TVS.

Findings	Number	Percentage
Fibroid	21	28.38
Hyperplasia	14	18.92
Pyometra	2	2.70
Polyp	7	9.46
Normal study	28	37.84

Table 2: Distribution of study population based on hysteroscopic findings.

Findings	Number	Percentage
Hyperplasia	20	27.03
Polyp	21	28.38
Atrophic	33	44.59

The maximum finding in histopathology were atrophic endometrium i.e. 43.24% cases. Carcinoma were found in 4.05% cases (Table 3).

Table 3: Distribution of study population based on type of endometrial finding (histopathology).

Findings	Number	Percentage
Disordered proliferative endometrium	11	14.86
Proliferative endometrium	15	20.27
Atrophic endometrium	32	43.24
Exogenous hormonal effects on endometrium	6	8.11
Atypical proliferative endometrium	5	6.76
Carcinoma	3	4.05

Out of 14 cases of endometrial hyperplasia in TVS 6 showed hyperplasia in hysteroscopy 4 showed polyp while in 4 cases of PMB hyperplasia was incidental finding of hysteroscopy (Table 4).

Table 4: Comparison of TVS showing hyperplasia with hysteroscopic findings.

Findings	Number	Percentage
Hyperplasia	6	42.86
Polyp	4	28.57
Incidental hysteroscopic finding	4	28.57

The transvaginal ultrasound showed 6 poly and 1 atrophic endometrium out of 7 cases in hysteroscopy.

Out of 20 cases of endometrial hyperplasia in hysteroscopy 4 showed proliferative endometrium 6 showed disordered proliferative endometrium 5 with exogenous hormonal

effect 3 with atypical proliferative endometrium 2 showed carcinoma.

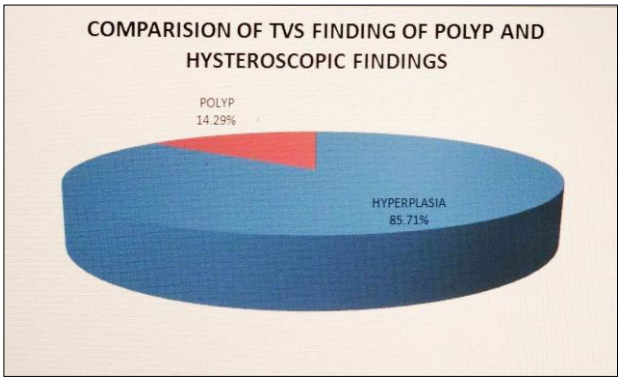

Figure 1: Comparison of TVS showing polyp and hysteroscopic findings.

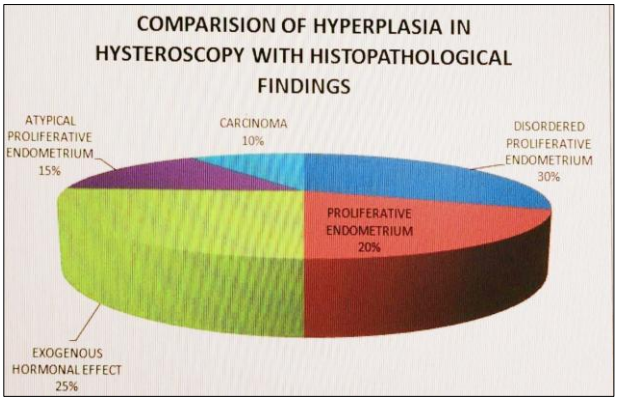

Figure 2: Comparison of hyperplasia in hysteroscopy with histopathological findings.

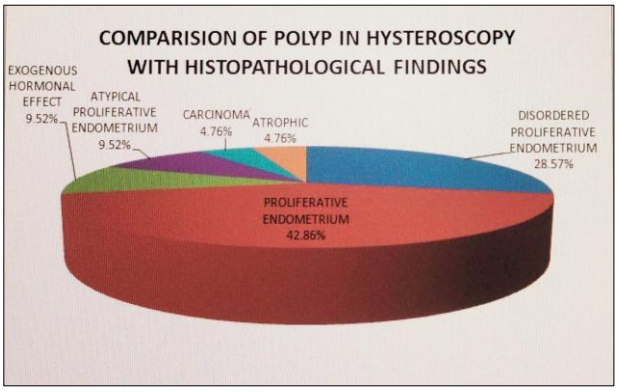

Figure 3: Comparison of polyp in hysteroscopy with histopathological findings.

Out of 21 polyp cases in hysteroscopy, 9 (42.86%) showed proliferative endometrium, 6 (28.57%) showed disordered proliferative endometrium, 2 (9.52) with exogenous hormonal effect, 2 (9.52%) with atypical proliferative endometrium, 1 (4.76%) showed carcinoma, and 1 (4.76%) atrophic endometrium.

Maximum patients who showed atrophic endometrium in hysteroscopy came out to have atrophic or inactive endometrium in histopathology also i.e. 93.93%.

Out of two pyometra patients one patient came out to be carcinoma endometrium.

Table 5: Comparison of atrophy in hysteroscopy with histopathological findings.

Findings	Number	Percentage
Atrophic	31	93.93
Disordered proliferative endometrium	1	6.07

DISCUSSION

Age distribution

The maximum age group showing postmenopausal bleeding in our study is between 51 to 55 years i.e. 48.65% in our study with peak incidence of malignancy in >61 years.

Verma et al, in their study found that incidence of PMB between the ages of 40-50 years was (45%) with mean age as 50.34 years.[19]

Peak incidence found by Naik et al, was 45-50 years for postmenopausal bleeding and 56-65 years for malignancy.[20]

Endometrial pathology (histopathology)

Most common endometrial pathology was atrophic endometrium (43.24%) in our study. Endometrial carcinoma was observed in (4.05%) females. Other findings in cases of post-menopausal bleeding Atypical proliferative endometrium (6.76%) Disordered proliferative endometrium (14.86%), proliferative endometrium (20.27%), and exogenous hormonal effect endometrium (8.11%).

In the study by Kaul et al, atrophic endometrium in 21 (42%) and hormonal effects in 5 (10%) and endometrial carcinoma was the histopathological report of 5 (10%) cases.[18] Sousa et al, in their study observed following pathologies in cases of PMB: atrophy (34.8%), atypical hyperplasia (1.4%) and endometrial carcinoma (13.0%).[17]

Hysteroscopy

On hysteroscopy, atrophic endometrium was seen in (44.59%) cases while polyp was seen in (28.38%) cases and hyperplasia in (27.03%) cases.

So, in final hysteroscopy report, we took (44.59%) cases with atrophic endometrium as normal and rest (55.41%) as abnormal. The diagnostic accuracy of hysteroscopy for

cases of PMB was 98% with sensitivity and specificity of 96.4% and 100% and positive predictive value and negative predictive value of 100% and 95.7% respectively.

In the study by Sousa et al, for the assessment of endometrial pathology as a whole, transvaginal sonography revealed sensitivity 79.5%, specificity 88%, positive predictive value 92.1%, negative predictive value 71%; and hysteroscopy revealed sensitivity 97.7%, specificity 92%, positive predictive value 95.5%, negative predictive value 95.8%.[17]

Limitations

As hysteroscopy being an invasive procedure patient often don't consent for it leading to lost to follow up. Also in our study, due to misuse of hormones like progesterone's for AUB by local physicians lead to postmenopausal bleeding picture.

CONCLUSION

In conclusion, we found that maximum pathologies identified on hysteroscopy were confirmed on histology. The majority of cases of PMB were found to be atrophic endometrium which was also shown in hysteroscopy. Hysteroscopy showed a high specificity and a high negative predictive value for women with endometrial cancer but there is need for increased training in identifying cancerous and premalignant lesions during hysteroscopy.

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REFERENCES

1. Bakour SH, Timmermans A, Mol BW. Management of women with postmenopausal bleeding: evidence-based review. Obstet Gynaecol. 2012;14:243-9.
2. Sean K. Endometrial cancer. In: Dewhurst's Textbook of Obstetrics and Gynaecology. 9th edition. Oxford. Willey Blackwell. 2018;876-83.
3. Brand AH. The woman with postmenopausal bleeding. Aus Fam Physic. 2007;36(3):116.
4. Smith-Bindman R, Kerlikowske K, Feldstein VA, Subak L, Scheidler J, Segal M, et al. Endovaginal ultrasound to exclude endometrial cancer and other endometrial abnormalities. JAMA. 1998;280(17):1510-7.
5. Kaur M, Singh R, Sharma M. Endovaginal sonographic evaluation of postmenopausal uterine bleeding. J Clin Diagn Res. 2010;4(2):2175-82.
6. Dawood NS, Peter K, Ibrar F, Dawood A. Postmenopausal bleeding: causes and risk of genital tract malignancy. J Ayub Med Coll Abbottabad. 2010;22(2):117-20.
7. Birinyi L, Daragó P, Török P, Csiszar P, Major T, Borsos A, et al. Predictive value of hysteroscopic examination in intrauterine abnormalities. Europ J Obstet Gynecol Reprod Biol. 2004;115(1):75-9.
8. Tabor A, Watt HC, Wald NJ. Endometrial thickness as a test for endometrial cancer in women with postmenopausal bleeding. Obstet Gynecol. 2002;99(4):663-70.
9. Litta P, Merlin F, Saccardi C, Pozzan C, Sacco G, Fracas M, et al. Role of hysteroscopy with endometrial biopsy to rule out endometrial cancer in postmenopausal women with abnormal uterine bleeding. Maturitas. 2005;50(2):117-23.
10. Timmermans A, Opmeer BC, Khan KS, Bachmann LM, Epstein E, Clark TJ, et al. Endometrial thickness measurement for detecting endometrial cancer in women with postmenopausal bleeding: a systematic review and meta-analysis. Obstet Gynaecol. 2010;116:160-7.
11. Singh P, Dwivedi P, Mendiratta S. Correlation of endometrial thickness with the histopathological pattern of endometrium in postmenopausal bleeding. J Obstet Gynecol India. 2016;66(1):42-6.
12. Wong AS-W, Lao TT-H, Cheung CW, Yeung SW, Fan HL, Ng PS, et al. Reappraisal of endometrial thickness for the detection of endometrial cancer in postmenopausal bleeding: a retrospective cohort study. BJOG. 2016;123:439-46.
13. Taipale P, Tarjanne H, Heinonen UM. The diagnostic value of transvaginal sonography in the diagnosis of endometrial malignancy in women with peri-and postmenopausal bleeding. Acta Obstet Gynecol Scand. 1994;73(10):819-23.
14. Karlsson B, Granberg S, Wikland M, Ylöstalo P, Torvid K, Marsal K, et al. Transvaginal ultrasonography of the endometrium in women with postmenopausal bleeding-a Nordic multicenter study. Am J Obstet Gynecol. 1995;172(5):1488-94.
15. Gull B, Carlsson S, Karlsson B, Yleostalo P, Milsom I, Granberg S. Transvaginal ultrasonography of the endometrium in women with postmenopausal bleeding: is it always necessary to perform an endometrial biopsy? Am J Obstet Gynaecol. 2000;182:509-15.
16. Garuti G, Sambruni I, Cellani F, Garzia D, Alleva P, Luerti M. Hysteroscopy and transvaginal ultrasonography in postmenopausal women. Int J Gynaecol Obstet. 1999;65(1):25-33.
17. Sousa R, Silvestre M, Almeida e Sousa L, Falcao F, Dias I, Silva T, et al. Transvaginal ultrasonography and hysteroscopy in postmenopausal bleeding: a prospective. Acta Obstet Gynecol Scand. 2001;80:5.

18. Kaul I, Kalsi M, Anand AK, Jad R, Menia V. Transvaginal sonography versus histopathology in postmenopausal bleeding: a prospective study. JK Sci. 2012;14(3):129-33.
19. Verma R. A study on abnormal uterine bleeding in perimenopausal age in rural Bihar. JMSCR. 2016;4(2):9262-74.
20. Naik VS, Rege JD, Kusum DJ. Pathology of genital tract in postmenopausal bleeding. Bombay Hospital J. 2005;47:14-7.

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