

Prevalence of Hysteroscopic Findings in Postmenopausal Bleeding Patients and Its Correlation with Clinicohistopathologic Diagnosis

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ABSTRACT

Introduction: Menopause is defined as permanent cessation of menstruation, caused by ovarian failure. Average age of menopause is 52 years, with a range of 40–58 years. Women in developed world will live approximately 30 years, or greater than a third of her life, beyond menopause. Therefore, it is important to ensure these years are as healthy and productive as possible. Any amount of postmenopausal bleeding (PMB) is of great concern and it has to be evaluated thoroughly.

Aim: To evaluate hysteroscopic findings in women with PMB in order to ascertain various causes of PMB and to determine their prevalence in our population and its correlation with histopathologic examination.

Materials and methods: This was a prospective observation study, comprising a total number of 50 postmenopausal women attending Gyne OPD at Department of Obstetrics and Gynaecology, Command Hospital (CH), Lucknow, Uttar Pradesh, carried out over 1 year. Postmenopausal women with UV prolapse, bleeding diathesis, surgical menopause, and cardiac diseases were excluded from the study. After taking detailed history, thorough clinical examination, and informed consent, patients are subjected to transvaginal sonography followed by hysteroscopy with office hysteroscope and wherever necessary, endometrial biopsy was taken. Final diagnosis was established with the help of clinicohistopathologic workup.

Results: The present study was carried out to evaluate hysteroscopically the causes of PMB. For this purpose, a total of 50 women with complaints of PMB were enrolled in the study. Age of patients ranged from 41–80 years. On hysteroscopy, half the cases ($n = 25$; 50%) were diagnosed as polyps followed by atrophic endometrium ($n = 8$; 16%). There were 7 (14%) cases in whom the cervix was classified as unhealthy without any particular diagnosis. A total of 5 (10%) cases were diagnosed as fibroid, 1 (2%) each as hyperplasia and degenerative changes, and 3 (6%) as endometrial carcinoma. These findings are well correlate with clinicohistopathologic diagnosis.

Conclusion: Hysteroscopy is an office procedure that can be performed as a daycare procedure, provides a better view of various structural pathologies, and in case of a doubtful pathology, helps in obtaining endometrial sample to confirm the diagnosis.

Keywords: Clinicohistopathologic diagnosis, Hysteroscopy, Postmenopausal bleeding.

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INTRODUCTION

Menopause is defined according to WHO as “the permanent cessation of menstruation resulting from the loss of ovarian follicular activity”.¹ Bleeding after menopause is an abnormality and is termed as postmenopausal bleeding (PMB). It is defined as uterine bleeding occurring after at least 1 year of amenorrhoea. Postmenstrual bleeding is a common complaint among patients visiting a gynecologist and comprises nearly 5–10% of total patient turnover to a gynecology clinic.²

It is important to ascertain the exact cause of PMB in order to understand the urgency of the situation and to offer appropriate treatment. In the recent years, transvaginal sonography has also become a useful tool in the assessment of PMB. Although in almost half the cases, clinical assessment, transvaginal sonography, and/or saline infusion sonography are able to diagnose and detect the cause of PMB, yet in a large proportion of cases, the diagnosis remains uncertain and needs to be validated.

In the past, in cases where a definitive diagnosis cannot be arrived through clinical or imaging modalities, dilatation and curettage for collection of endometrial tissue for histopathologic examination was the only recourse available. However, there is always a difficulty in missing the precise site of intrauterine

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lesion and thus missing the opportunity of a correct histopathologic diagnosis. With the introduction of hysteroscopy, the chances of getting a correct diagnosis have enhanced tremendously. Hysteroscopy enables to directly visualize the uterine cavity completely and in case of any abnormal visualization, the representative tissue can be collected for histopathologic examination.

Hysteroscopy is an easy to perform office procedure that can be done in a short period of time without causing discomfort to patients and their attendants. It is a widely recognized diagnostic modality in the evaluation of abnormal uterine bleeding in premenopausal, perimenopausal, and postmenopausal cases with high accuracy. It is highly accurate for diagnosing endometrial lesions, such as, polyps, submucous myomas, endometrial adenocarcinoma, and hyperplasia, i.e., the conditions associated with PMB.

Considering the high accuracy of hysteroscopy in evaluation of PMB, the present study was carried out with an aim to evaluate hysteroscopic findings in women with PMB in order to assess the various causes of PMB and to determine their prevalence in our population and its correlation with histopathologic examination.

MATERIALS AND METHODS

This was a prospective observation study, comprising a total number of 50 postmenopausal women attending Gyne OPD at Department of Obstetrics and Gynaecology, Command Hospital (CH), Lucknow, Uttar Pradesh. The study was carried out over 1 year from July 2018 to June 2019. Postmenopausal women with UV prolapse, bleeding diathesis, surgical menopause, and cardiac diseases were excluded from the study.

After taking detailed history, thorough clinical examination, and informed consent, patients are subjected to transvaginal sonography followed by hysteroscopy with office hysteroscope. After decision and patient selection for office hysteroscopy, pre-procedure counseling was done. Patient was sufficiently explained what hysteroscopy is, the objectives of performing the procedure, and expected results. Tab misoprostol 400 µg was inserted per vaginum 3–4 hours prior to the procedure by the woman. We also avoided the use of any local anesthesia/analgesia/premedication. The patient was observed in a side room after the procedure for some time and was sent home with a prescription of analgesic if required. Hysteroscope (Karl Storz) 4 mm scope with 5 mm sheath with an oblique lens of 30° with ringer lactate as distention media and camera (Karl Storz telecom II camera) was used which was connected to the monitor via VCR, which helped us record interesting cases. A standard hysteroscopy tray containing vaginal speculum, vulsellum, uterine sound, and graduated cervical dilators was kept ready and these instruments were used only in cases of difficult negotiation of cervical os and in cases where endometrial biopsy was taken.

Under strict asepsis, the procedure was initiated with vaginoscopy approach, without introducing any other instruments, other than the scope, which reduced significantly the pain felt as well as chance of trauma and bleeding during the procedure, increasing its acceptability to the patient. The other instruments like speculum, vulsellum, uterine manipulator, and artery forceps with biopsy syringe were used in case of abnormal findings where endometrial biopsy was required, or in case of requirement for removal of small intrauterine polyp/CuT.

The confidentiality of the study subject was maintained as per Good Clinical Practice Guidelines by the Government of India. The data obtained for the purpose of study was fed into computer using Microsoft Excel 2013 software. Data analysis was performed using Statistical Package for Social Sciences, Version 21.0. Diagnostic efficacy of hysteroscopy was expressed in terms of sensitivity, specificity, positive predictive value, negative predictive value, and accuracy respectively.

RESULTS

The present study was carried out to evaluate hysteroscopically the causes of PMB. For this purpose, a total of 50 women with complaints of PMB were enrolled in the study.

Table 1 shows the general profile of the women enrolled in the study. Age of patients ranged from 41–80 years. Maximum (*n* = 23; 46%) were aged 51–60 years followed by those aged 61–70 years (22%), 41–50 years (20%) and >70 years (12%), respectively. Mean age of patients was 58.42 ± 8.93 years. Majority of patients were from urban (52%) regions. A total of 24 (48%) were from rural areas. Except for 2 (4%) working women, all the others were homemakers. Socioeconomically, those from middle socioeconomic group were dominant (*n* = 38; 76%) followed by upper middle socioeconomic group (*n* = 12; 24%).

Table 2 shows distribution of cases according to other presenting complaints. Decreased libido (64%), vaginal dryness (34%), insomnia (18%), and pain abdomen/suprapubic pain (14%) were the most common presenting complaints. There were two cases (4%) complaining of postcoital bleeding and 1 (2%) complaining of dyspareunia.

Maximum number of women had achieved menopause between age 46 and 50 years (*n* = 14; 28%) followed by those aged 41–45 and 51–55 years (*n* = 11; 22% each), <40 years (*n* = 9; 18%) and 56–60 years (*n* = 5; 10%) respectively. Mean age at achievement of menopause was 47.50 ± 5.88 years.

Time since achievement of menopause ranged from 1.1–40 years. Maximum (*n* = 24; 48%) had achieved menopause for >10 years, 9 (18%) each had achieved menopause <2 years

Table 1: General profile of the women enrolled in the study

Sl. No.	Characteristic	Statistics
1	Age	
	41–50 years	10 (20%)
	51–60 years	23 (46%)
	61–70 years	11 (22%)
	>70 years	6 (12%)
	Mean age ± SD (range) in years	58.42 ± 8.93 (41–80)
2	Place of residence	
	Rural	24 (48%)
	Urban	26 (52%)
3	Occupation	
	Homemaker	48 (96%)
	Working	2 (4%)
4	Socioeconomic status	
	Middle	38 (76%)
	Upper middle	12 (24%)

Table 2: Distribution of cases according to other presenting complaints

Sl. No.	Complaint	No. of cases	Percentage
1	Pain abdomen/suprapubic pain	7	14
2	Vaginal dryness	17	34
3	Decreased libido	32	64
4	Insomnia	9	18
5	Postcoital bleeding	2	4
6	Dyspareunia	1	2



Table 3: Hysteroscopic findings

Sl. No.	Finding	No. of cases	Percentage
1	Unhealthy cervix	7	14.0
2	Atrophy	8	16.0
3	Polyp	25	50.0
4	Fibroid	5	10.0
5	Hyperplasia	1	2.0
6	Endometrial carcinoma	3	6.0
7	Degenerative changes	1	2.0

Table 4: Final diagnosis (based on biopsy/HPE)

Sl. No.	Diagnosis	No. of cases	Percentage
1	Normal	1	2.0
2	Atrophy	13	26.0
3	Polyp	22	44.0
4	Fibroid	5	10.0
5	Hyperplasia	4	8.0
6	Endometrial carcinoma	5	10.0

Table 5: Diagnostic efficacy of hysteroscopy for different endometrial abnormalities

Sl. No.	Sensitivity	Specificity	PPV	NPV	Accuracy
Polyp	100	89.3	89.3	100	94.0
Atrophy	61.5	100	100	88.1	90.0
Fibroid	100	100	100	100	100
Endometrial cancer	60	100	100	95.7	96.0
Hyperplasia	25	100	100	93.9	94.0

and 3–5 years back while 8 (16%) had achieved menopause 6–10 years back. Mean time since achievement of menopause was 11.18 ± 8.66 years.

Pap smear cytological findings were in general indicative of inflammatory/nonneoplastic lesions in 44 (88%) cases. In 5 (10%) cases, they were unsatisfactory/inadequate while in 1 (2%) case it was diagnosed as CIN III.

Table 3 shows hysteroscopic findings. On hysteroscopy, half the cases ($n = 25$; 50%) were diagnosed as polyps followed by atrophic endometrium ($n = 8$; 16%). There were 7 (14%) cases in whom the cervix was classified as unhealthy without any particular diagnosis. A total of 5 (10%) cases were diagnosed as fibroid, 1 (2%) each as hyperplasia and degenerative changes, and 3 (6%) as endometrial carcinoma.

Table 4 shows final diagnosis, in 1 (2%) case, no abnormality was seen. There were 13 (26%) cases diagnosed as atrophy, 22 (44%) as polyps, 5 (10%) each fibroid and endometrial carcinoma, and 4 (8%) as hyperplasia.

Table 5 shows diagnostic efficacy of hysteroscopy for different endometrial abnormalities. All the 22 cases diagnosed as polyp on biopsy/HPE were detected as polyps by hysteroscopy. Hysteroscopy additionally detected three cases as polyps (1 atrophy and 2 hyperplasia on final diagnosis). Thus, for polyps, there were 22 true-positive, 3 false-positive, no false-negative, and 25 true-negative cases. Hence, corresponding sensitivity, specificity, positive

predictive value, and negative predictive values were 100, 89.3, 89.3 and 100%, respectively. Hysteroscopy had an accuracy of 94% for detection of polyps.

Histopathologically, there were 13 cases of atrophy, however, hysteroscopy could detect only 8 of them successfully. Remaining 5 cases were diagnosed as unhealthy cervix ($n = 4$) and polyp ($n = 1$) by hysteroscopy. Thus, for atrophy, there were 8 true-positive, no false-positive, 5 false-negative, and 37 true-negative cases. Hence, corresponding sensitivity, specificity, positive predictive value, and negative predictive values were 61.5, 100, 100, and 88.1%, respectively. Hysteroscopy had an accuracy of 90% for detection of atrophy.

All the five cases confirmed as fibroid on final diagnosis were also diagnosed as fibroid by hysteroscopy. There was no false-positive or false-negative case. Hence, for fibroid, hysteroscopy had an absolute sensitivity, specificity, positive predictive, negative predictive, and accuracy value (100%).

Out of five cases confirmed as endometrial cancer by final diagnosis, three were diagnosed as endometrial cancer by hysteroscopy, however, one each was diagnosed as degenerative changes and unhealthy cervix respectively by hysteroscopy. Thus for endometrial cancer, there were 3 true-positive, no false-positive, 2 false-negative, and 45 true-negative cases and corresponding sensitivity, specificity, PPV, NPV, and accuracy values of hysteroscopy were 60, 100, 100, 95.7, and 96%, respectively.

Out of four cases confirmed as hyperplasia, hysteroscopy could diagnose only one case as hyperplasia successfully, while two were diagnosed wrongly as polyp and one as unhealthy cervix respectively. Thus, for hyperplasia, there was 1 true-positive, no false-positive, 3 false-negative, and 46 true-negative cases and corresponding sensitivity, specificity, PPV, NPV, and accuracy values of hysteroscopy were 25, 100, 100, 93.9, and 94%, respectively.

DISCUSSION

Considering the usefulness of hysteroscopy in evaluation of PMB, in present study we carried out hysteroscopic evaluation of postmenopausal women as per the recommended guidelines.

In present study, age of women ranged from 41–80 years with a mean age of 58.42 years. Majority of patients (66%) were in age range 41–60 years. The mean age of women with PMB undergoing hysteroscopic evaluation has shown a considerable variability in different studies. Ribeiro et al.³ in a study from Brazil reported it as 61.1 years. In a study from Portugal, Metello et al.⁴ reported it as 61.5 years but another study from Portugal⁵ reported it to be 64.9 years while Tinelli et al.⁶ from Italy reported it to be 58.6 years, which is similar to our study. Back home, in an Indian study, similar to our study, the major concentration of women was seen in the age range 50–55 years.⁷ Nagalakshmi et al.⁸ in another study from India reported the mean age of women as 54.76 years. Junnare et al.⁹ too reported the mean age of women in their study as 53.15 years. Relatively younger age profile of women in studies from Asian countries as compared to those from western countries could be attributable to a relatively lower age of menopause. As per an estimate, the average age of menopause in Asian women is 46 years.⁷

In present study, majority of patients were from urban areas (52%), were nonworking homemakers (96%), and belonged to middle socioeconomic strata (76%). Compared to present study, a number of studies have reported a dominance of rural women from lower socioeconomic class.^{10,11} There could be two reasons for this

difference, first, our center is located in an urban area, despite that almost half (48%) of women were from rural areas, secondly as far as socioeconomic class is concerned, our facility primarily caters to Armed Forces personnel and their dependents who belong to middle or upper middle classes of society. Nevertheless, it might not be ruled out that the lower representation of patients from upper classes indicates the need of proper awareness regarding preventive measures and hygiene related issues. Another reason for this could be cited as lack of accessibility to specialized services to women from lower socioeconomic strata.

In present study, except for PMB, decreased libido (64%), vaginal dryness (34%), and insomnia (18%) were the most common presenting complaints. All these complaints could be associated with hormonal changes associated with menopause. With the onset of menopause, the estrogen secretion is decreased which is responsible for decreased sexual drive and is also responsible for symptoms like vaginal dryness.^{12,13} These hormonal changes are also responsible for PMB in some cases.

In present study, majority of women had attained menopause before the age of 50 years (68%). Mean age at menopause was 47.50 ± 5.88 years. This finding is in agreement with the average age of menopause in Asian women, which is reported as 46 years.⁷

In present study, maximum number of women (48%) had attained menopause >10 years back. Mean duration since menopause was 11.18 ± 8.66 years. Nagalakshmi et al.⁸ reported this gap to be 7.95 years among symptomatic women.

In present study, mean years of married life were 40.76 ± 9.35 years. Median parity was P3. Almost half (52%) were sexually active. Compared to present study, Tandulwadkar et al.⁷ in their study reported median parity as primipara. In their study, there were only 8 (13.3%) multipara. Compared to their study, in present study the proportion of multipara women was much higher.

In present study, history of drug use (52%), gynecological procedures (36%), hypertension (32%), diabetes (24%), hypothyroidism (4%), and general surgical procedures (22%) were the most common medical and surgical histories present. Hypertension and diabetes are major metabolic issues and could in turn affect other systemic and hormonal equilibrium. Similarly, drug use could also influence the normal physiological mechanism. However, one must not forget that the average age of women was nearly 60 years, where metabolic disorders like hypertension and diabetes are quite common, especially in an urban environment. Obesity, hypertension, diabetes, and other lifestyle and reproductive factors have been recognized as the factors associated with PMB that also enhance the risk of endometrial cancer.^{14,15} In present study, 11 (22%) women were in overweight and obese category too. Comorbid conditions like diabetes, hypertension, hypothyroidism, and obesity have often been encountered in women with PMB. In a study by Tandulwadkar et al.,⁷ diabetes, hypertension, hypothyroidism, and obesity was seen in 20, 13.33, 5, and 13.33% patients, respectively. They also found that majority of their cases with endometrial cancer had these factors.

In present study, no particular dietary, bowel, or bladder disorder or personal habit was recorded as a risk factor. Majority were vegetarian (54%) and did not have appetite problems (96%). There was no woman with sleep, bowel, or bladder abnormality. None of the women were smoker or alcohol user. No other habit was reported.

In present study, general and systemic examination findings were generally normal and did not give a particular notion toward

any hormonal or physiological abnormality. Though, one patient had abnormally raised serum creatinine level indicative of renal dysfunction, however, it is rarely reported as the cause of vaginal bleeding.¹⁶ Though coagulation abnormalities and chronic renal failure may cause menorrhagia,¹⁷ however, none of the patients in present study were known cases of chronic renal disease.

As such, after ruling out different physiological and hormonal reasons, and a suspicious TVS finding, the focus was mainly toward finding out a pathologic cause of PMB. For the screening purpose, cytological evaluation using pap smear was done. However, pap smear findings were suggestive of inflammatory/nonneoplastic lesions in 44 (88%) cases. They were unsatisfactory in 5 (10%). One case was diagnosed as CIN III. As such, cytology (Pap smear) is a less reliable tool for diagnosis of PMB.^{18,19} Pap smear is generally performed as a routine test and its findings need to be corroborated with advanced diagnostic tools.

For this purpose, hysteroscopy was done. On hysteroscopy, half the cases ($n = 25$; 50%) were diagnosed as polyps followed by atrophic endometrium ($n = 8$; 16%). There were 7 (14%) cases in whom the cervix was classified as unhealthy without any particular diagnosis. A total of 5 (10%) cases were diagnosed as fibroid, 1 (2%) each as hyperplasia and degenerative changes, and 3 (6%) as endometrial carcinoma. Hysteroscopic findings in different case series have shown wide diversity. Table 6 shows the hysteroscopic findings in PMB cases in some of the contemporary studies.

An overview of Table 6 above shows a dominance of normal, atrophic, and polyps in almost all the series. The rate of detection of endometrial carcinoma in different series ranges from 0²⁰–11.7%.⁷ In present series, it was 6%. In present study, rate of fibroid/myoma detection was only 10%, however, some other workers detected it to be much higher, viz. Sarvi et al.²¹ detected it in 18.2% cases while Gupta et al.²⁰ detected in 27.14%. However, some other workers like Sharma and Tiwari²² and Junnare et al.⁹ did not report it in any of their cases. Similarly, hyperplasia was reported in only 2% of our cases, whereas Junnare et al.⁹ found it in 30% of their cases. The wide diversity in different pathologies in different studies could be owing to diversity in samples as well as sample size. Given a number of endometrial pathologies involved in PMB, series with smaller sample size could have incidental rather than actual proportional representation.

In present study, final diagnosis was done by clinicohistopathologic correlation. On final diagnosis, in 1 (2%) case, no abnormality was seen. There were 13 (26%) cases diagnosed as atrophy, 22 (44%) as polyps, 5 (10%) each fibroid and endometrial carcinoma, and 4 (8%) as hyperplasia. As such, except for atrophy which was diagnosed in 26% cases hysteroscopically, no other major change in diagnosis was observed. However, Junnare et al.⁹ in their study found a major change in proportion of hyperplasia cases which were diagnosed in 30% cases hysteroscopically but were finally confirmed in only 11% cases. However, Tandulwadkar et al.⁷ showed excellent correlation between hysteroscopy and histopathology. Pop-Trajković-Dinić,²³ on the one hand, found an underdiagnosis of normal endometrium and endometrial polyp by hysteroscopy but an overdiagnosis for hyperplasia and atrophy as compared to histopathology. Sarvi et al.,²¹ on the other hand, found overdiagnosis of carcinoma in two out of three cases, which were proven to be complex or atypical hyperplasia on histopathology. Although hysteroscopy is generally comparable to the final diagnosis in most of the cases, however, the advantage of the hysteroscopy lies in the fact that it allows endometrial biopsy through which the diagnosis could be confirmed histopathologically.

Table 6: Hysteroscopic findings in postmenopausal bleeding cases in some of the contemporary studies

Sl. No.	Author (year), location	No. of cases and characteristics	Hysteroscopic findings
1	Ribeiro et al. (2007), ³ Brazil	510 Mean age 61.1 ± 2.0 years	Polyps (67.5%), cancer/hyperplasia (8.7%), myomas (7.3%), normal (4.5%), others (11.9%)
2	Tandulwadkar et al. (2009), ⁷ India	60 (81.6% >50 years)	Atrophy (65%), hyperplasia (6.67%), polyp (11.7%), submucous fibroid (1.7%), endometrial carcinoma (11.7%)
3	Pop-Trajković-Dinić (2013), ²³ Serbia	148 (mean age 69 years)	Normal (26.2%), endometrial polyp (29.6%), cervical polyp (16.5%), submucous myoma (5.51%), endometrial hyperplasia (7.58%), atrophy (12.5%), endometrial cancer (2.06%)
4	Gupta et al. (2015), ²⁰ India	70 (50 peri, 20 postmenopausal)	Normal (42.85%), endometrial polyp (11%), fibroid (27.14%), endometrial hyperplasia (20%)
5	Sarvi et al. (2016), ²¹ Turkey	110 (mean age 57 years, 67-AUB, 43 thickened endometrium)	Normal (15.5%), polyp (48.2%), myoma (18.2%), hyperplasia (14.5%), carcinoma (3.6%)
6	Sharma and Tiwari (2016), ²² Nepal	50 peri and postmenopausal aged 45–64 years	Normal (34%), hyperplastic (36%), atrophy (18%), endometrial polyp (6%), cervical polyp (2%), endometrial carcinoma (4%)
7	Junnare et al. (2019), ⁹ India	98 (87% aged ≤60 years)	Normal (36%), atrophy (19%), hyperplastic (30%), endometrial polyp (13%), posterior wall growth (1%)
8	Present study (2019), India	50 (mean age 58.42 years)	Unhealthy cervix/normal (14%), atrophy (16%), polyp (50%), fibroid/myoma (10%), hyperplasia (2%), endometrial cancer (6%), degenerative changes not otherwise classified (2%)

As compared to final diagnosis, hysteroscopy had a sensitivity and specificity of 100 and 89.3% respectively for polyps, 61.5 and 100% for atrophy, 100 and 100% for fibroids, 60 and 100% for endometrial cancer, and 25 and 100% for hyperplasia. In their study, Rebeiro et al.³ reported the sensitivity and specificity of hysteroscopy to be 92.6 and 65.8% for polyps, 52.6 and 95.9% for fibroids, 94.4 and 97% for cancer or hyperplasia, and 35.3 and

99.6% for normal endometrium. However, Tandulwadkar et al.⁷ in their study similar to present study, found 100% sensitivity and specificity for fibroids and 87.5 and 98.1% for endometrial carcinoma. In present study, the sensitivity for hyperplasia was quite low (25%), however, Tandulwadkar et al.⁷ reported it to be 100%. Pop-Trajković-Dinić^{23,24} reported the sensitivity and specificity of hysteroscopy for different pathologies in the range 91.4–100% and 96–100%. Although we could not achieve sensitivity and specificity to that extent. In present study, sensitivity was relatively much lower for hyperplasia and endometrial cancer. One of the reasons for this could be small number of sample size and fewer number of cases with these pathologies. Nevertheless, hysteroscopy coupled with endometrial biopsy is a useful tool for the evaluation of PMB. Further studies on larger sample size might help in overcoming the limitation of incidental fluctuations in sensitivity and specificity.

CONCLUSION

PMB is one of the most common reasons for visit to a gynecologist by a woman who has attained menopause. The recommended guidelines suggest clinical, hormonal, and transvaginal sonography as the primary diagnostic tools. Sonography is considered to be adequate for evaluation of PMB in cases where endometrial thickness does not exceed 4 mm. However, in cases where endometrial thickness is >4 mm, further evaluation through sonohysteroscopy, office hysteroscopy, or endometrial sampling is recommended.

Hysteroscopy is an office procedure that can be performed as a daycare procedure, provides a better view of various structural pathologies, and in case of a doubtful pathology helps, in obtaining endometrial sample to confirm the diagnosis. Hysteroscopy helps to identify the women with PMB having an abnormal pathology from those who do not have any such pathology. Along with endometrial biopsy it is considered to be highly accurate in identification of endometrial neoplasia and its precursors. It has been considered to be the method of choice for evaluation of women with PMB especially those aged 45 years or above.

The present study was carried out to evaluate hysteroscopic findings in women with post menopausal bleeding in order to ascertain various causes of PMB and to determine their prevalence in our population. For this purpose, a total of 50 women with complaints of PMB were enrolled and were subjected to thorough history taking, clinical, and biochemical evaluation followed by hysteroscopic evaluation, and wherever necessary, endometrial biopsy was taken. Final diagnosis was established with the help of clinicohistopathologic workup. The findings of present study suggested that hysteroscopy has a useful role in evaluation of PMB, especially in the diagnosis of polyps and fibroids. Given fewer number of cases, the usefulness of hysteroscopy in evaluation of endometrial cancer and hyperplasia could not be established adequately. Further studies on larger number of sample size will help in providing more useful and confirmatory information.

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