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Original Research Article

Clinicopathological study of postmenopausal bleeding in a tertiary hospital: a retrospective analysis

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ABSTRACT

Background: Postmenopausal bleeding is bleeding from the genital tract one year after menopause. The incidence is 4-11%. It is one of the cardinal signs of endometrial carcinoma. There is 10% risk of genital cancer and 10% risk of significant pathology and needs evaluation. In majority of them, it is due to benign condition such as endometrial atrophy or polyp. The aim of the present study was to evaluate the endometrial thickness by transvaginal ultrasound and to correlate with the histopathological pattern of the material obtained by hysteroscopic guided biopsy or curettage.

Methods: A retrospective analysis of all the patients attending the outpatient department from January 2017 to December 2019 was done. This study was undertaken at M.S. Ramaiah Medical College and Hospitals. All patients with postmenopausal bleeding were evaluated clinically, then they underwent PAP smear, transvaginal ultrasound for endometrial thickness. This was followed by hysteroscopic guided biopsy and curettage. The material obtained was sent for histopathological examination as it is the gold standard for further management.

Results: A total of 89 patients were enrolled for the study. The final results revealed atrophic endometrium in 35.95%, hyperplasia without atypia in 20.2%, polyps in 11.2% and endometrial carcinoma in 6.7%.

Conclusions: In postmenopausal bleeding assessing endometrial thickness by transvaginal ultrasound is ideal. Hysteroscopy is a simple technique to evaluate the uterine cavity and take biopsy for histopathological examination, which is the gold standard.

Keywords: Postmenopausal bleeding, Transvaginal ultrasound, Endometrial thickness, Histopathological examination

INTRODUCTION

Postmenopausal bleeding (PMB) is bleeding from the genital tract one year after menopause. The World Health Organization (WHO) defines menopause as permanent cessation of menstruation resulting from loss of ovarian activity.¹ The incidence is 4-11%. There is 10% risk of genital cancer, 10% risk of significant pathology and needs evaluation. PMB is the cardinal sign of endometrial carcinoma and so all patients need thorough evaluation. In majority of the patients, it is due to benign condition such as polyp or endometrial atrophy. Women with risk factors like nulligravida, those with multiple sexual partners, obese, diabetic, taking exogenous estrogens/tamoxifen,

who attain menopause late must be extensively investigated.²

Aims and objectives

The study was aimed to evaluate the endometrial thickness by transvaginal ultrasound and to correlate with the histopathological pattern of the biopsy material obtained by hysteroscopy.

METHODS

The study was conducted at department of obstetrics and gynaecology in M.S. Ramaiah Medical College and

Hospitals, Bangalore from January 2017 to December 2019. It was a retrospective study. The data was collected from patient case notes (medical records department), OT register, pathology department (HPE section). A total of 89 patients with postmenopausal bleeding who fulfilled the criteria were studied.

Inclusion criteria

All patients with PMB during the above period were analyzed and included in the study.

Exclusion criteria

All patients with malignant lesions of vagina, vulva, cervix was excluded. Patients with bleeding disorders and those on hormone replacement therapy were excluded.

Procedure

The details regarding demographics, prior medical, surgical history were noted. All of them had a detailed clinical examination and PAP smear. This was followed by transvaginal ultrasound. The size of the uterine cavity, endometrial thickness and any adnexal pathology, was noted. All patients were subjected to hysteroscopy and guided curettage/polypectomy in the operation theatre after preanesthetic evaluation. The material was sent for histopathology examination and based on the results, further treatment was planned.

Statistical analysis

All information entered and analyzed using Microsoft excel software. Descriptive statistics of the histopathological examination (HPE) pattern were summarized and analyzed in terms of percentage.

RESULTS

A total of 89 patients with postmenopausal bleeding presenting to outpatient department were enrolled after fulfilling inclusion and exclusion criteria. About 37.07% were above the age of 60 years. Regarding parity index, para3 and above accounted for 57.3%. Associated comorbidities such as hypertension was seen in 40.44% and diabetes mellitus in 21.34%. Obesity was seen in 22.47%. The endometrial thickness was more than 12.1 mm in 20.22%. The histopathological pattern was atrophic endometrium in 35.95%, endometrial carcinoma was seen in 6.7%.

Table 1: Age distribution of patients.

Age (years)	N	%
48-52	12	13.4
52-56	13	14.6
56-60	21	23.59
>60	33	37.07

Table 2: Parity index.

Parity	N	%
Nullipara	2	2.24
Para 1	8	8.98
Para 2	28	31.46
Para 3 and above	51	57.3

Table 3: Associated comorbidities.

Comorbidity	N	%
HTN	36	40.44
DM	19	21.34
Obesity	20	22.47
Cardiac disease	4	4.49
Asthma	2	2.24
Nil	47	52.8

Table 4: Endometrial thickness in mm.

ET in mm	N	%
4-6	22	24.71
6.1-8	10	11.23
8.1-12	39	43.82
>12.1	18	20.22

Table 5: Histopathological pattern.

HPE pattern	N	%
Atrophic	32	35.95
Hyperplasia without atypia	18	20.22
Hyperplasia with atypia	3	3.3
Endometrial Ca	6	6.7
Polyp	10	11.2
Proliferative	15	16.8
Disordered	2	2.24
No opinion	2	2.24

DISCUSSION

Menopause is the permanent cessation of menstruation resulting from the loss of ovarian follicular activity.³ Bleeding that occurs 12 months after the cessation of menstruation is labelled as PMB. The primary goal in the diagnostic evaluation of postmenopausal patients with bleeding is to exclude malignancy as increasing age is a risk factor for endometrial carcinoma. The risk of endometrial cancer in women with PMB increases with age approximately 1% at the age of 50 years to 25% at 80 years of age.⁴

Majority of our patients were above 56 years of age. About 23.59% were between 56-60 years where as Sreelatha et al has reported 28% between 54-60 years.⁵ In our study nulligravida accounted for 2.24% and Kothapally et al reported 6.7%.⁶ The associated co-morbidities like diabetes mellitus was seen in 21.34% in our study and Tandulwadkar et al reported diabetes mellitus in 20% of

their patients.⁷ In our study, the endometrial thickness was >12 mm in 20.2% of our patients by transvaginal ultrasound and Tandulwadkar et al reported in 11.6% of their patients.⁷ The histopathological pattern was atrophic in 35.95%, and endometrial carcinoma in 6.7%. Singh et al reported atrophic in 38.33%, simple hyperplasia in 18.33% and carcinoma in 13.33%.⁴

Postmenopausal thickened endometrium indicates an increased risk of malignancy or other pathology (hyperplasia or polyp).¹⁵ Hysteroscopy has been introduced into practice for the assessment of endometrium. It is easy, fast and accurate method to detect intrauterine pathology.¹⁶ Though blind endometrial biopsies are carried out, the diagnosis of endometrial polyps can be missed, which may lead to the underdiagnosis of this pathology during menopause.^{17,18} Hysteroscopy provides direct visualization of endometrial cavity and targeted biopsy or excision of the polyp can be done. Postmenopausal patients without bleeding, but thickened endometrium on ultrasound needs evaluation & sampling. Similarly, sampling is essential in postmenopausal patients without bleeding, but endometrial fluid on ultrasonography (USG).

One of the concerns with hysteroscopy is the possible dissemination of cancer cells through the fallopian tubes. But all studies have shown that positive peritoneal cytology was similar with or without hysteroscopy.

Limitations

Limitations of the current study are as mentioned below.

This was a retrospective study and data was gathered from medical files. All patients underwent hysteroscopy and guided biopsy in the operation theatre under anaesthesia.

Office hysteroscopy and endometrial pipelle biopsy was not offered though it was a simple procedure. The risk of anaesthesia was explained and the patients had to do all the pre anaesthetic lab tests.

CONCLUSION

Evaluation of PMB is mandatory to rule out malignancy. TVS to assess endometrial thickness will help. Hysteroscopy is a simple instrument as it helps in taking biopsy for HPE, the gold standard for further management.

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