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Original Research Article

Endometrial thickness in perimenopausal women with abnormal uterine bleeding

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ABSTRACT

Background: Abnormal uterine bleeding (AUB) is the most common presenting menstrual complaint in women of perimenopausal age group. During this period, the endocrinological, biological and clinical features of approaching menopause commence. The incidence of uterine pathology increases in this age group. The objective of current study is to measure the endometrial thickness by transvaginal scan in perimenopausal patients with AUB and comparison of histopathological outcomes.
Methods: This is a prospective observational study in the department of obstetrics and gynecology at Srinivas institute of medical sciences and research Centre from August 2022 to August 2023. This study included total of 115 patients with AUB between 40 to 52 years of age.
Results: Among 115 patients in the study most of the patients were between 44-47 years of age. Majority of the women were multiparous (97.4 %). Transvaginal ultrasound examination revealed 105 out of 115 patients had endometrial thickness between 12-22.9mm. On HPE 92 out of 115 patients to have simple hyperplasia without atypia. Correlation between TVS and endometrial thickness shows that only 0.86% of patients with endometrial thickness between 12-22.9 has complex hyperplasia with atypia.
Conclusions: Transvaginal scan is a simple, convenient and economical way to indirectly visualize the endometrial cavity. It can be used to accurately distinguish between normal and pathological endometrial conditions in patients with AUB in perimenopausal age group.

Keywords: Abnormal uterine bleeding, Endometrial hyperplasia, Endometrial thickness, Histopathology, Perimenopausal women, Transvaginal sonography

INTRODUCTION

Abnormal uterine bleeding is one of the most common complaints with which a patient visits a gynaecologist.[1] Perimenopause is characterized by menstrual cycle irregularities due to fluctuating estrogen levels. Although these changes are uncertain and distinctive for each woman.[2] Menstruation is a cyclical bleeding from the uterine endometrium in response to ovarian hormones which is under the control of hypothalamo- pituitary-ovarian axis.[3]

AUB may be acute or chronic and defined as bleeding from the uterus that is abnormal in regularity, volume, frequency or duration and occurs in absence of pregnancy.[4] During perimenopause due to shift in the hormones, there is unopposed estrogen action leading to AUB.[5] Long anovulatory periods with unopposed estrogen action can result in hyperplasia of the endometrium which increases the risk of endometrial cancer.[2]

Determination of endometrial pathology using TVS has been affecting in evaluating AUB and have reduced the use of invasive procedures. It is convenient, economical and

feasible approach for evaluating AUB.[1] The high frequency transducer placed closer to the region of interest permits better visualization of uterus and the endometrium.[5] It has an impact even on the quality of life by significantly reducing the morbidity and mortalities.[6] It has been used as a screening method in asymptomatic postmenopausal women before or during hormonal replacement therapy.[7]

The underlying disease can be detected by histological variations of endometrium taking into account the age of the woman, the phase of her menstrual cycle, and use of any exogenous hormones The underlying disease can be detected by histological variations of endometrium taking into account the age of the woman, the phase of her menstrual cycle, and use of any exogenous hormones The underlying disease can be detected by histological variations of endometrium taking into account the age of the woman, the phase of her menstrual cycle, and use of any exogenous hormones The underlying disease can be detected by histological variations of endometrium taking into account the age of the woman, the phase of her menstrual cycle, and use of any exogenous hormones. The underlying disease can be detected by histological variations of endometrium taking into account the age of the woman, the phase of her menstrual cycle, and use of any exogenous hormones. The underlying disease can be detected by histological variations of endometrium taking into account the age of the woman, the phase of her menstrual cycle, and use of any exogenous hormones.

The underlying cause can be identified by the histological changes in the endometrium taking into account the stage of her menstrual cycle and use of any exogenous hormones including use of mirena or progesterone supplements.[8] The present study aims to corelate endometrial thickness by Transvaginal scan in perimenopausal patients with abnormal uterine bleeding and its correlation with histopathological outcomes.

METHODS

This is a prospective observational study in the department of obstetrics and gynecology at Srinivas institute of medical sciences and research Centre, Mukka, Mangalore from August 2022 to August 2023.

This study included total of 115 patients with AUB between 40 to 52 years of age. These patients were fulfilling the inclusion and exclusion criteria. Written informed consent was taken before enrolling the participants in the study.

The data was collected using proforma. Patient details were collected like menstrual history, duration of the complaints, obstetric history, medical and surgical history, family history. General physical examination, systemic and gynecological examination was performed. Routine investigations were done. A master chart has been designed and presented.

Inclusion criteria

Inclusion criteria were the age group between 40-52 years and perimenopausal women with AUB.

Exclusion criteria

Exclusion criteria were uterine bleeding due to fibroid, fibroid polyp, Ca cervix, profuse white discharge, profuse bleeding, pregnancy, females not in perimenopausal age group, patients with bleeding disorder and injuries of vulva and vagina.

RESULTS

Among 115 patients in the study most of the patients were between 44-47 years of age. Mean age of patients was found to be 44.04 +/- 3.33 years. Mean age of menarche was found to be 12.89 +/- 1.30 years (Table 1).

Table 1: Distribution of patients according to age.

Age group	No of patients	Percentage
40-43	38	33.04
44-47	42	36.52
48-52	35	30.44

Majority of the women were multiparous (97.4%). Only 2.60% of the women were nulliparous. The study was carried out in Mangalore where there is high degree of acceptance of family planning methods hence 66.10% were Para 2 or less (Table 2).

Table 2: Distribution of patients according to parity.

Parity	No of patients	Percentage
Nulliparous	3	2.60
Parity <2	76	66.10
Parity >2	36	31.3

Table 3: Distribution of patients according to endometrial thickness.

Endometrial thickness (mm)	No of patients	Percentage
12-22.9	105	91.32
23-33.9	9	7.82
>34	1	0.86

In this study 91.32% of patients had endometrial thickness between 12-22.9mm, 7.82% of patients had endometrial thickness between 23-33.9 mm and 0.86% of patients had endometrial thickness >34mm (Table 3).

Histopathological examination 92 out of 115 patients to have simple hyperplasia without atypia, 12.19% of patients to have endometrial polyp, 0.86%of patients with complex hyperplasia with atypia and 0.86% of patients with focal squamous and tubal metaplasia (Table 4).

Table 4: Histopathology examination report.

Histopathology findings	Endometrial thickness-12-22.9	Endometrial thickness-23-33.9	Endometrial thickness->34
Simple hyperplasia without atypia	84	8	-
Endometrial polyp	14	-	-
Pill endometrium	5	1	1
Complex hyperplasia with atypia	1	-	-
Focal squamous and tubal metaplasia	1	-	-

Out of 92 patients who had endometrial hyperplasia without atypia, 8 of them had endometrial thickness between 23-33.9mm and 84 patients had ET between 12-22.9mm. 1 patient with complex hyperplasia with atypia had ET between 12-22.9mm. Focal squamous and tubal metaplasia was seen in 1 patient with ET between 12-22.9mm. Endometrial polyp was seen in 1 case with ET between 12-22.9mm. Out of the 7 cases of pill endometrium, 5 patients had ET between 12-22.9mm and 1 patient had ET between 23-33.9mm and 1 patient had ET >34mm (Table 5).

DISCUSSION

In the present study, majority of the patients with abnormal uterine bleeding belong to the perimenopausal age group and AUB being most common symptoms and endometrial hyperplasia without atypia is the most common histopathology report seen in perimenopausal women. A distinctive approach is required in perimenopausal women with AUB because of possible malignant conditions. Transvaginal sonography has been efficient in detecting pathology in the uterine cavity.[6] In the present study, the age of the patients ranged from 40-52 years of age. According to the study, majority of the cases is between 44-47 years of age. One of the probable causes is because of decline in the number of ovarian follicle and estradiol level as women approach menopause. Most of our patients were multipara. In perimenopausal age group there is unopposed estrogen action which leads to endometrial hyperplasia. therefore, irregular cycles, anovulatory cycles and pcos, type 2DM, family history of hereditary non polyposis colorectal cancer are risk factors for progression to endometrial cancer.[7] Endometrial hyperplasia without atypia were seen in 80 percent of the cases. Present study shows 0.86% cases of Complex hyperplasia with atypia. endometrial hyperplasia is often encountered in perimenopausal age group because of failure of ovulation. Endometrial polyp is seen in 12.19% of cases. D and C reveals endometrial pattern in various forms of AUB and helps to exclude any organic pathology.[8,9]

CONCLUSION

Transvaginal scan is a simple, convenient, noninvasive, economical, feasible way to indirectly visualize the endometrial cavity. It can be used to accurately distinguish between normal and pathological endometrial conditions in patients with abnormal uterine bleeding in perimenopausal age group.

Invasive procedures should be considered when the Endometrial thickness is more than 8mm or inconclusive results in transvaginal scan to rule out pre malignant conditions or endometrial cancer. D and C being a blind procedure requires hospitalization and general anesthesia or IV sedation which can be safely replaced by transvaginal sonography as an initial investigation in perimenopausal women with AUB.

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Conflict of interest: None declared
Ethical approval: The study was approved by the Institutional Ethics Committee

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