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TO EVALUATE THE SENSITIVITY OF TVS IN PREDICTING ENDOMETRIAL PATHOLOGY

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Abstract
Background: To evaluated the sensitivity of TVS in predicting endometrial pathology
Methods: This is a descriptive type of observational study conducted among women with Postmenopausal Bleeding who attended the Gynaecology OPD SMS Medical College Jaipur. 60 Postmenopausal patients were included in this study. After fulfilling the inclusion crtieria a detailed history and clinical examination was done as per Proforma, followed by investigations.
Results: In majority of patients histopathlogy is found as atrophic endometrium i.e. 23 cases, out of which majority of patients had endometrial thickness < 4 mm on TVS. After that endometrial hyperplasia is found in 14 patients. On TVS majority of these cases had ET > 4 mm i.e. 11 cases but 3 cases of endometrial hyperplasia had ET < 4 MM, these 3 cases were likely to be missed at a cut off of 4 mm of endometrial thickness on TVS. Endomatrial polyp had ET > 6 mm on TVS.
Conclusion: Transvaginal sonography is safe, simple, non invasive and cost effective in the diagnosis of endometrial disease.
Keywords: TVS, Endometrial, Hyperplasia.

Introduction

Menopause is a greek word and in the strict sense means “men”(month) and “pause” (cessation) i.e cessation of menstruation. The WHO defines menopause as permanent cessation of menstruation resulting from the loss of ovarian follicular activity. The clinical diagnosis is confirmed following stoppage of menstruation (amenorrhea) for twelve consecutive months without any other pathology. The average age at which women go through menopause is 47.5 years in India.(1) Post Menopausal Bleeding is bleeding that occurs 12 months after the last normal period and causes of postmenopausal uternine bleeding(2) are Endometrial atrophy, Estrogen replacement therapy, Endometrial polyps, Endometrial hyperplasia, Endometrial cancer, Cervical cancer, Uterine sarcoma, Urethral caruncle, Trauma etc. (2)

Endometrial atrophy is the most common endometrial finding in women with postmenopausal bleeding. Atrophic Endometritis/Vaginitis becomes clinically apparent 4-5 years after the menopause and objective changes as well as subjective complaints like dyuria, dyspareunia, sexual dysfuntion,dryness of the vagina are present in 25-50% of all postmenopausal women .As the condition is attributable to estrogen deficiency ,estrogen replacement therapy is offered as appropriate to the individual,in addition to alternative strategies.(2)

Purpose of study is to correlate the endometrial thickness by transvaginal sonography with the histopathology in women with post menopausal bleeding, so that all patients with postmenopausal bleeding can be evaluated by TVS for endometrial thickness and endometrial sampling to diagnose malignant pathology as early as possible.

Material and Methods

This is a descriptive type of observational study conducted among women with Postmenopausal Bleeding who attended the Gynaecology OPD SMS Medical College Jaipur

60 Postmenopausal patients were included in this study. After fulfilling the inclusion crtieria a detailed history and clinical examination was done as per Proforma, followed by investigations.

Study type:

Hospital based prospectivestudy.

Study design:

Hospital based cross sectional study.

Study period:

Feb.2019 onwards till completion of sample size.

Study setting:

The study was conducted at Department of Obstetrics and Gynecology, SMS Medical College, Jaipur

Study participants:

Patients admitted with chief compliant of Postmenopausal Bleeding in Department of Obstetrics and Gynecology, SMS Medical College, Jaipur.

Inclusion criteria:

Women with postmenopausal bleeding who has given written consent to participate in this study.

Exclusion criteria:

Any lesions of vulva, vagina or cervix.

Women with blood dyscrasias.

Postmenopausal women on Hormonal therepy or tamoxifen therapy.

Patient refusal to participate in study

Sample size:

Sample size is calculated at 95% confidence level, assuring 90% prevalence of endometrial pathalogy as histopathological report and 96.77% sensitivity of TVS in detecting endometrial pathalogies as per results of seed article. [The Journal of Obstetrics and Gynecology of India (January-February 2016)].

At the absolute allowarre error of 5%, minimum 52 patients of postmenopausal bleeding of are required as sample size which is enhanced & rounded off to 60 patients as final sample size.

Statistical analysis

Appropriate parametric and non parametric tests will be for lilnear and categorical variables respectively depending on data yield.

Pre value <0.05 will be taken as significant. Med Calc 16.4 version software will be used for statistical calculation.

Results

TABLE 1: COMPARISON OF ENDOMETRIAL THICKNESS WITH HISTOPATHOLOGY

Histology	No. of cases	Endometrial thickness on TVS (in mm)				
		<4	4.1-6	6.1-8	8.1-10	>10
Normal	6	5	0	1	0	0
Atropic	23	17	5	1	0	0
Disordered	7	1	4	2	0	0
Endometrial polyp	2	0	0	1	1	0
Hyperplasia	14	3	4	3	3	1
Malignancy	8	0	0	1	1	6

In majority of patients histopathlogy is found as atrophic endometrium i.e. 23 cases, out of which majority of patients had endometrial thickness < 4 mm on TVS. After that endometrial hyperplasia is found in 14 patients. On TVS majority of these cases had ET > 4 mm i.e. 11 cases but 3 cases of endometrial hyperplasia had ET < 4 MM, these 3 cases were likely to be missed at a cut off of 4 mm of endometrial thickness on TVS. Endomatrial polyp had ET > 6 mm on TVS.

TABLE 2: DIAGNOSTIC VALUE OF TRANSVAGINAL SONOGRAPHY AT ENDOMETRIAL THICKNESS OF 4 MM AND 6 MM

	Endometrial Thickness on TVS	
	< 4 MM	< 6 MM
Sensivity	87.09	61.29
Specificity	75.8	93.1
PPV	79.4	90.4
NPV	84.6	69.2
Diagnostic accuracy	81.6	76.6
P. Value	<0.0001	<0001

Statistical analysis revealed p value < 0.0001 for ET at 4 and 6 mm which was highly significant.

Discussion

This study has been taken up with the aim to correlate the endometrial thickness was measured by transvaginal sonography with histopathology of Endmetrium obtained at endometrial biopsy in postmenopausal women having post menopausal bleeding. Sensivity, specificity, positive predictive value, negative predictive value of endometrail thickness by transvaginal sonography were also calculated. This study was conducted from february 2019 to march 2020 in department of obstetric and gynaecology at SMS Hospital in collaboration with Department of pathology, SMS medical college, Jaipur. Out of 1212 gynaceological admission during study period, there were 80 postmenopausal women who presented with complaints of post menopausal bleeding are included in the study.

Mateos F, Zarauz R, Seco C, Rayward JR, del Barrio P, Aguirre J et al (1997)[3] Study was done for the assessment with TVS of endometrium thickness in women with

postmenopausal bleeding. It was a prospective trial of TVS evaluation followed by endometrial sampling in 168 women with postmenopausal. They resulted in 88.6% sensitivity, 90.6% specificity, 92% PPV for any endometrial pathology.

Auslender R (1993) [4] They studied transvaginal sonography in patient with postmenopausal bleeding. The study determined with senstivity & specificity for measurement of endometrial thickness using transvaginal sonography to diagnose an endometrial abnormality at 100 and 75% respectively and corresponding figures for hysteroscopy were 97 and 88%.

Singh Pushpa, Dwivedi Pooja, Mendiratta Shweta (2016) [5] they studied the correlation of endometrial thickness with the histopathological pattern of endometrium in post menopausal bleeding. Study was done in 60 patients study revealed that sensitivity of TVS was 87.09%, specificity 75%, PPV 79.4% and NPV 84.6% in diagnosing the endometrial pathology in women with postmenopausal bleeding.

Conclusion

Transvaginal sonography is safe, simple, non invasive and cost effective in the diagnosis of endometrial disease.

References

1. Unni J. Third consensus meeting of Indian Menopause Society (2008): A summary. Journal of Mid-life Health. 2010;1(1):43.
2. Berek J.S, Berek D.L;chapter 35 Uterine cancer;Berek & Novak's Gynecology;15th edition;1833-1835
3. Mateos F, Zarauz R, Seco C, Rayward JR, del Barrio P, Aguirre J et al (1997) Assessment with transvaginal ultrasonography of endometrial thickness in women with postmenopausal bleeding. Eur J Gynaecol Oncol 18:504–507
4. Auslender R (1993) Vaginal ultrasound in patients with postmenopausal bleeding. Ultrasound Obstet Gynecol 3:426–428
5. Singh P, Dwivedi P, Mendiratta S. Correlation of Endometrial Thickness with the Histopathological Pattern of Endometrium in Postmenopausal Bleeding. The Journal of Obstetrics and Gynecology of India. 2014;66(1):42-46