

Evaluation of Thickened Endometrium in Asymptomatic Post Menopausal Women

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ABSTRACT

Objectives: To determine the significance of endometrial sampling and histopathology in asymptomatic postmenopausal women with endometrial thickness >5mm

Material and Methods: Fifty asymptomatic postmenopausal women with incidentally discovered endometrial thickness >5mm on ultrasonography for other reasons were included in the study. All the patients underwent endometrial sampling by curetting and sent for histopathological evaluation.

Results: Normal histological endometrium was seen in 33 (66.0%) cases. Abnormal endometrial pathology was seen in 17 (34%) cases; simple hyperplasia in 10 (20%) cases and complex hyperplasia in 5 (10.0%) cases. 2 cases of endometrial carcinoma (4%) were also seen and both had endometrial thickness above 11 mm.

Conclusions: Histopathological examination should always be performed in asymptomatic post menopausal women with thickened endometrium as it is associated with malignancy in a significant proportion of cases. Also endometrial thickness cut off value of 11mm on USG had a high predictive value for endometrial carcinoma.

Keywords: Histopathology; Endometrium; Postmenopausal; Ultrasonography

INTRODUCTION

Malignancy of Endometrium is the commonest malignancy of the female reproductive system and is the fourth most frequent site of malignant neoplasm in females in western countries. [1] Asymptomatic endometrial thickening is defined as endometrium ≥ 5 mm thick on

ultrasonography (USG) in postmenopausal women without complaints of bleeding. [2]

The condition presents dilemma to the treating clinician and is a common reason for referral after routine USG for non-gynaecologic reasons. [2] Endometrium is measured at its maximum thickness on a midline sagittal image of the uterus obtained on USG. The endometrium may normally be thicker in the first year after the last menstrual period, reflecting some residual hormonal activity. [3] Postmenopausal bleeding is commonest symptom of endometrial cancer and is encountered in 90% of cases. However upto 20% of women may have no symptoms at the time of diagnosis. [4]

Studies have suggested that an endometrial thickness cut-off value of 5 mm constitutes an abnormal test result in postmenopausal women with vaginal bleeding [5] and risk of cancer is significantly low below this cut-off. However, a standardized cut-off value for postmenopausal women without bleeding that can accurately differentiate normal endometrium from pathologically thickened endometrium has not been well established. [4]

So many asymptomatic women with endometrial thickness > 5mm will be exposed to unnecessary D&C or hysteroscopy which carry potential risks. [6] Screening of asymptomatic endometrial carcinoma by USG before the onset of postmenopausal bleeding leads to an earlier diagnosis. [7] An earlier diagnosis leads to a lower stage of disease, a less radical surgery, a therapy with lesser side effects

and, subsequently, a better prognosis of the affected patients. [8] So the study was conducted to determine the significance of endometrial sampling and histopathology in asymptomatic postmenopausal women with endometrial thickness >5mm and correlate sonographic and pathological findings.

MATERIAL AND METHODS

This prospective study was conducted in fifty post menopausal women who underwent USG evaluation for non uterine causes. Inclusion criteria included menopause duration of at least one year, no history of vaginal bleeding since menopause and endometrial thickness > 5mm on USG. Exclusion criteria included any history of Hormone Replacement Therapy, Tamoxifen or Raloxifene for the last year, endometrial procedures done within the last year (biopsy or D&C) and any known uterine or ovarian lesions. Relevant history and findings of clinical examination were recorded in all patients. USG was performed in all patients using Trans-abdominal or Trans-Vaginal approach as per patient's convenience. Measurements of uterus were obtained in the mid-sagittal plane, so that the endometrium was visible from fundus to cervix. Endometrial thickness was measured within 1cm from the uterine fundus or at its widest point in cases of asymmetrical endometrial appearance. Endometrial

sampling was done as an outpatient procedure without anesthesia. Samples were taken from anterior and posterior uterine walls and uterine fundus and sent for histopathological examination. Results were tabulated and evaluated using appropriate statistical methods.

RESULTS

Fifty post menopausal women without any history of vaginal bleeding formed the material of the study. Mean age of the patients was 52 years (age range 42-64 years). Forty nine women were parous while single nulliparous women were also seen.

Table 1: Comparison of histological findings and endometrial thickness on USG

Endometrial Thickness	Histological Finding	No	%
>5 mm and < 8 mm	1. Normal	25	50
	2. Simple Hyperplasia	4	8
	3. Complex Hyperplasia	-	-
	4. Endometrial Carcinoma	-	-
>8 mm and < 11 mm	1. Normal	7	14
	2. Simple Hyperplasia	5	10
	3. Complex Hyperplasia	-	-
	a) With Atypia	-	-
	b) Without Atypia	1	2
4. Endometrial Carcinoma	-	-	
>11mm	1. Normal	1	2
	2. Simple Hyperplasia	1	2
	3. Complex Hyperplasia	-	-
	a) With Atypia	2	4
	b) Without Atypia	2	4
4. Endometrial Carcinoma	2	4	
Total		50	100

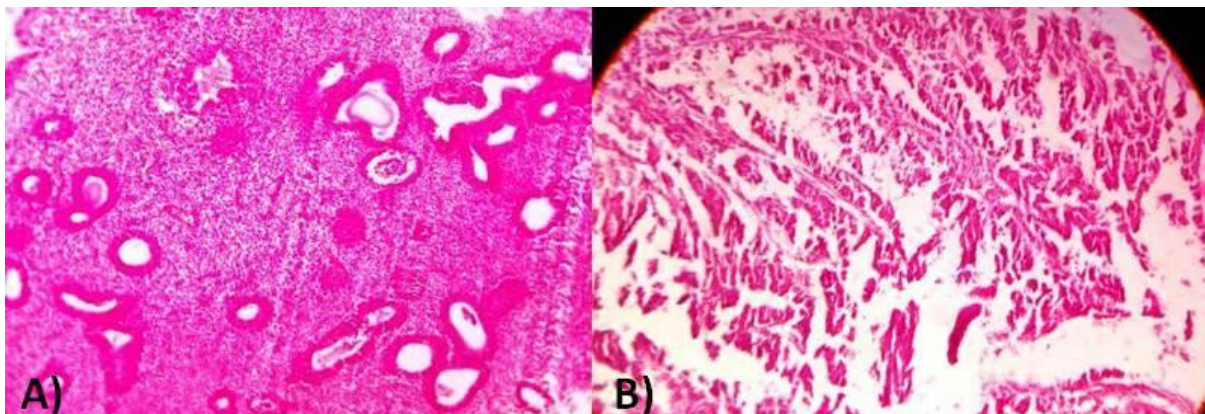


Figure 1: A) Simple Hyperplasia B) Endometrial Carcinoma

On USG, Endometrial thickness >5mm but <8mm was seen in 58% cases, >8 mm and <11 mm in 26% cases and > 11 mm in 16%

cases (Table 1). Adequate endometrial sampling was performed in all cases and subjected to histopathology. On

Histopathological evaluation, normal endometrium was seen in 33 (66%) cases. Abnormal endometrial pathology was detected in 17 (34%) cases; simple hyperplasia in 10 (20%) cases, complex hyperplasia without atypia in 3 (6%) cases, complex hyperplasia with atypia in 2 (4%) cases and endometrial carcinoma in 2 (4 %) cases. All cases of endometrial carcinoma and majority of cases with complex hyperplasia were observed in patients with endometrial thickness >11mm on USG. Majority of cases of simple hyperplasia were seen with endometrial thickness >5 mm but <8mm.

DISCUSSION

The current study was performed to investigate the significance of histological evaluation of increased endometrial thickness detected by USG in postmenopausal women without any history of vaginal bleeding. Menopause results in atrophic changes in the endometrium due to estrogen deficiency. In cases with increased endometrial thickness detected on USG in the postmenopausal period, numerous cut off values have been considered to indicate the need for further evaluation and management.^[9] Although the significance of USG and hysteroscopy in postmenopausal women with bleeding has been documented in several studies,^[9,10] data on asymptomatic postmenopausal women with thickened endometrium are limited and poses a clinical dilemma.

Majority of cases in our study had endometrial thickness < 8mm. In our study abnormal endometrial pathology was detected in 17 (34 %) cases, simple hyperplasia in 10 (20%) cases, complex hyperplasia in 5 (10%) cases and endometrial cancer in 2 (4 %) cases. Endometrial thickness was significantly higher in cases with abnormal histopathology of the endometrium than those with normal histopathology. Also all cases with endometrial cancer and majority of cases with complex hyperplasia had endometrial thickness >11 mm on USG.

Austrian Society of Gynecology and Obstetrics and the Austrian Society of Gynecologic Oncology recommends endometrial sampling in cases of a postmenopausal bleeding or an endometrial thickness >11mm in asymptomatic women.^[11] In our study, all cases of endometrial carcinoma were seen with endometrial thickness >11mm. Smith-Bindman et al.^[12] developed a theoretical model according to which the risk of endometrial cancer was found to be 6.7% in asymptomatic postmenopausal women when the endometrial thickness was greater than 11 mm and a very low incidence of 0.002% among women with endometrial thickness less than 11 mm. Osmer et al^[9] proposed an endometrial thickness of 8 mm as a cutoff value for the diagnosis of pathological endometrial changes, with a sensitivity of 81% and specificity of 89% for the diagnosis of endometrial pathologies. Endometrial cancer was found in 3.5% of patients in the symptom free group. Ozelci R et al^[4] also proposed optimal endometrial thickness cut off value of 10.5 mm for premalignant and malignant lesions with 77% sensitivity and 62% specificity. Conversely, Yasa et al.^[13] found that 11 patients with an endometrial thickness of 11 mm or less had endometrial hyperplasia and endometrial cancer on histological examination.

One Limitation of our study is small sample size. Another limitation was that majority of examinations were carried out by trans-abdominal route with a limited number of trans-vaginal examinations. Therefore, larger prospective studies are warranted and an individualized assessment based on patient characteristics and risk factors for endometrial pathologies should be conducted in asymptomatic postmenopausal women.^[4]

CONCLUSIONS

Asymptomatic endometrial thickening detected on USG in postmenopausal women often poses a clinical management dilemma. Though the

incidence of endometrial carcinoma is not very high in women with no bleeding, best outcome occurs when it is found at an early stage. So, all cases with thickened endometrium in post menopausal women must be subjected to endometrial curetting and histopathological evaluation. Since all cases of endometrial carcinoma and majority of cases with complex hyperplasia were seen in women with endometrial thickness >11 mm, so it is reasonably safe to assume to 11 mm as cut off value to predict malignancy with high sensitivity.

Conflicts of Interest: Nil

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