# ROLE OF ULTRASOUND IN EVALUATION IN PATIENTS WITH POST MENOPAUSAL BLEEDING

**Mohamad Hamdy Mahmoud Zahran, Hebatallah Hassan Mamdouh Hassan, Tamer Hanafy Mahmoud*, Mennatullah Moustafa Helmy Matar**

**Department of Radiodiagnosis and Intervention, Department of Obstetrics and Gynecology*, Faculty of Medicine, University of Alexandria**

## INTRODUCTION

Postmenopausal bleeding (PMB) is self-explanatory, as any bleeding from the genital tract occurring in the postmenopausal period, arising after 12 months of amenorrhoea in a women of menopausal age. Generally, four to 11 per cent of postmenopausal women will experience bleeding while the most common cause for PMB is atrophy, the diagnostic algorithm for PMB is designed to detect cancer, particularly endometrial cancer. Vaginal, and endometrial. Atrophy accounts for 60–80 per cent of all causes of PMB, while endometrial hyperplasia and cancer each account for ten per cent of cases.
In Egypt endometrial cancer was diagnosed in 38% of females presenting with PMB study was conducted in Alexandria, Egypt and included all postmenopausal females presenting to the University Hospital of Gynecology and Obstetrics. The introduction of transvaginal Doppler ultrasound permitted detailed hemodynamic assessment of genital tract tumors and abnormal blood flow to malignant endometrial changes has been demonstrated in uterine and sub endometrial arteries. Endometrial thickness as measured by transvaginal grey-scale sonography can reliably discriminate between normal and pathological endometrium in women with post-menopausal bleeding.

## AIM OF THE WORK

The aim of this work will be directed to the role of ultrasound in the evaluation of post menopausal bleeding.

## PATIENTS AND METHODS

**PATIENTS:** This study was conducted on 50 Post-menopausal women above 45 years old and were presented to the Outpatient Clinic in El-Shatby Maternity University Hospital, complaining from post-menopausal bleeding referred to department of Diagnostic Radiology, Alexandria Main University Hospital for ultrasound and MRI whenever indicated achieve from January 2020 to march 2021.

**METHODS:**

I- Full history taking II-Thorough clinical examination. III-Imaging.

A-Ultrasound examination was done on a Siemens X300 ultrasound machine (Erlangen, Germany) including a convex probe for the abdominopelvic approach (5.2 MHz) and an endovaginal probe for the transvaginal approach if possible (9.4 MHz).

1-Trans abdominal ultrasound 2- Tans vaginal ultrasound

B-MRI protocol is done for some cases when indicated.

IV- Histopathological study V- Statistical analysis

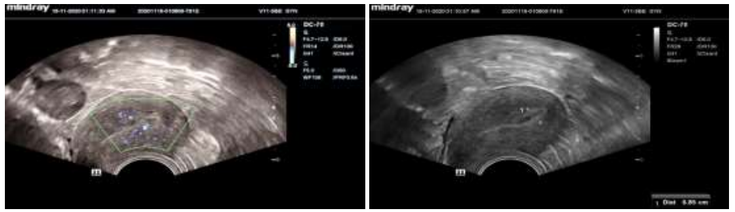
## RESULTS

**Table 1:** Distribution of the studied cases according to the echogenicity of the lesion, diffuse lesions or focal, doppler vascularity and endometrial myometrial interface. (n=50)

| | No. | % |
|---|---|---|
| **Echogenicity** | | |
| **Negative** | 19 | 38.0 |
| **Positive** | 31 | 62.0 |
| **Focal/ Diffuse** | | |
| **Negative** | 26 | 52.0 |
| **Positive** | 24 | 48.0 |
| **Doppler vascularity** | | |
| **Negative** | 19 | 38.0 |
| **Positive** | 31 | 62.0 |
| **Endometrial myometrial interface** | | |
| **Negative** | 25 | 50.0 |
| **Positive** | 25 | 50.0 |

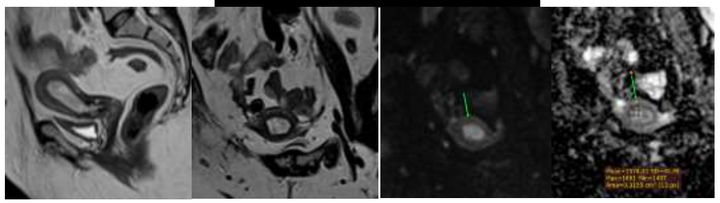
**Table 2:** Distribution of the studied cases according to pathology (n = 50)

| Pathology | No | % |
|---|---|---|
| **Negative (Benign)** | 31 | 62 0 |
| **Polyp** | 11 | 35 5 |
| **Hyperplasia with atypia** | 5 | 16 1 |
| **Hyperplasia without atypia** | 4 | 12 9 |
| **Proliferative endometrium** | 2 | 6 5 |
| **Acellular smear** | 1 | 3 2 |
| **Atrophy** | 6 | 19 4 |
| **Secretory endometrium** | 2 | 6 5 |
| **Positive (Malignant)** | 19 | 38 0 |
| **Endometrial adenocarcinoma** | 8 | 42 1 |
| **Squamous cell carcinoma** | 3 | 15 8 |
| **Undifferentiated carcinoma** | 4 | 21 1 |
| **Mixed cell carcinoma** | 2 | 10 5 |
| **Serous carcinoma** | 2 | 10 5 |



**Case1:** The endometrium shows an echogenic focus (measuring 0.85 cm) which is irregular, showing vascularity from the surrounding myometrium. Pathologically proven endometrial carcinoma.

**Case 2:**
**A)**
A regular hyperechoic polypoidal lesion is seen measuring 5.6x3.7 cmProved to be hyperplastic endometrial polyp by pathology



**B):** Sagittal & axial oblique T2 showing increased endometrial thickening with scarce cysts and central fibrous stalk of polypoid nature with intact endometrial myometrial interface

**C):** DWI and ADC axial oblique showing no diffusion restriction ADC of 1.57 (> 1) x 10-3mm2/s and confirmed intact endometrial myometrial interface

## CONCLUSION

Postmenopausal bleeding is a common indication for ultrasound evaluation of the postmenopausal pelvis. it is important to quickly and accurately diagnose or exclude neoplasia in patients presenting with postmenopausal bleeding.
Transvaginal ultrasound measuring endometrial thickness is a reasonable first non-invasive step in evaluating a patient with postmenopausal bleeding. And can be an important screening tool to determine which patients require sampling.
The thickness of endometrium, Echogenicity and Doppler vascularity as assessed by Transvaginal ultrasound (TVS) may be helpful in identifying the cause of post-menopausal bleeding (PMB).



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