

Introduction

In Abnormal uterine bleeding, detection of uterine artery doppler velocimetric indices measurement serves as a non-invasive screening tool to detect endometrial pathology in women with peri and post-menopausal bleeding to distinguish benign endometrium from malignant or premalignant endometrium

Results: The RI and PI values were found to be higher in benign endometrium as compared to pre-malignant/malignant endometrium due to increase in blood flow in malignant endometrium and decrease in vascular impedance. The mean RI at 0.535 by AUROC, sensitivity of 42.9%, specificity of 99.5%, PPV of 75%, NPV of 98% and diagnostic accuracy of 97.6%. The mean PI at 1.995 by AUROC, sensitivity of 57.1%, specificity of 82.1%, PPV of 10%, NPV of 98.2% and diagnostic accuracy of 81.2%.


Reference: 1. Nguyen PN, Nguyen VT. Endometrial thickness and uterine artery Doppler parameters as soft markers for prediction of endometrial cancer in postmenopausal bleeding women: a cross-sectional study at tertiary referral hospitals from Vietnam. *Obstet Gynecol Sci.* 2022 Sep;65(5):430-440

Objectives: To evaluate the role of uterine artery doppler velocimetric indices (RI and PI) as a non-invasive screening procedure to detect endometrial pathology with peri and post-menopausal bleeding. To correlate the ultrasonographic results with histopathological findings in normal and pathological endometrium

Methodology: prospective observational study of 222 patients We recruited 160 perimenopausal women with abnormal uterine bleeding and 62 were postmenopausal women with postmenopausal bleeding. Patients were screened with transvaginal ultrasound for endometrial thickness, morphology and Doppler indices were obtained from the uterine artery (Resistance index and the Pulsatility index). These results were compared to the histopathological findings, to draw a correlation.

Conclusion: In peri and postmenopausal women with abnormal uterine bleeding, uterine artery doppler velocimetry is an easy, cost effective, non-invasive screening tool to distinguish benign from malignant or premalignant endometrium, combined with TVS to increase the screening accuracy. In conjunction with HPE which is gold standard to detect the type of endometrial abnormality, is confirmatory.

Variable	Category(s) Suggesting Outcome Present	Category(s) Suggesting Outcome Absent	Total Positive s	True Positiv es	True Negativ es	False Positiv es	False Negativ es
HPE Final Impression	Pre-Malignant/Malignant	Benign	7 (3.4%)	-	-	-	-
Mean RI (Cutoff: 0.535 by ROC)	<=0.535	>0.535	4 (1.9%)	3 (1%)	200 (96%)	1 (0%)	4 (2%)
Mean PI (Cutoff: 1.995 by ROC)	<=1.995	>1.995	40 (19.2%)	4 (2%)	165 (79%)	36 (17%)	3 (1%)



HPE, n=222		Mean ± SD Median (IQR) Min-Max Frequency (%)
HPE Impression		
Inadequate		14 (6.3%)
Benign		201 (90.5%)
Pre-Malignant		3 (1.4%)
Malignant		4 (1.8%)
HPE Final Impression		
Benign		201 (96.6%)
Pre-Malignant/Malignant		7 (3.4%)

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