

Role of Ultrasonography and Colour Doppler in the Evaluation of Post Menopausal Bleeding

Essay

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Introduction

The cessation of menses resulting from the loss of ovarian function is natural event which is part of the normal aging process. (**Laugiano , 1992**).

Postmenopausal bleeding is often the first and principal symptom of endometrial cancer and be regarded as a symptom of genital tract malignancy until proved otherwise (**Gusberg et al., 1988**).

Postmenopausal bleeding (PMB) is caused by endometrial cancer in about 10% of patients, although in some patient populations, this percentage is as high as 30% (**Robert et al, 2000**).

The most common cause of uterine bleeding in postmenopausal women is atrophic endometrium (49.9%). Other endometrial pathologies are hyperplasia, polyps, adenocarcinoma (9.8, 9.2, 8.1%, respectively) (**Wilailak et al, 2005**).

INTRODUCTION

There are many different imaging appearances of the normal and abnormal endometrium. Although Ultrasonography (US) is almost always the first modality used in the radiologic work-up of endometrial disease, the use of multiple imaging modalities is common. Whether using US, Magnetic Resonance (MR) imaging, sonohysterography, or hysterosalpingography (*Kenneth et al, 2001*).

Fleisher et al., 1988 stated that the endometrium in a postmenopausal women should be thin (not more than 6-8 mm) and regular. Additionally endometrial irregularities and polyps can be seen (**Robert, 1991**).

One of the studies conducted by **Dijkhuizen et al., 1996** found that ultrasonographic evaluation of the endometrium may reduce the number of invasive endometrial investigations by 40%.

Transvaginal ultrasound (TVS) measurement of endometrial thickness has been demonstrated to have high accuracy in excluding endometrial polyps, hyperplasia and cancer in women with post-menopausal bleeding (*J Weaver et al, 2004*).

INTRODUCTION

With Doppler transvaginal ultrasound, the uterine artery and its smaller tributaries can be readily visualized and blood flow velocity waveforms can be measured. A good correlation has been found between the uterine artery flow velocity waveform and the histopathological diagnosis in women with pre, and postmenopausal bleeding (**kurjak et al., 1993**).

Transvaginal colour Doppler sonography with a possibility of analyzing vascular changes in the female pelvis, and/or blood flow at the level of large as well as smaller uterine blood vessels, and colour angiogenic changes at the myometrium and endometrial level, presents a new and important diagnostic dimension in evaluation of abnormal uterine bleeding, in particular in women older than 40 (**Dragojevic et al, 2005**).

Endometrial volume assessment by 3D ultrasound was introduced in the last few years. This technique is reliable and therefore valid for small and irregular tissue, and suggested to be useful in measuring endometrial volume(**El-Lamiea et al, 2007**).

AIM OF THE WORK

The aim of this study is to evaluate the role of Ultrasonography (US) and colour Doppler in postmenopausal bleeding (PMB).

