KASR ALAINY

The diagnostic role of office hysteroscopy and three-dimensional endometrial volume measurement in evaluation of women with peri menopausal bleeding

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بسم الله الرحمن الرحيم

{.. وَأَنزَلَ اللّهُ عَلَيْكَ الْكِتَابَ وَالْحِكْمَةَ وَعَلَّمَكَ مَا لَمْ تَكُنْ تَعْلَمُ وَكَانَ فَضْلُ اللّهِ عَلَيْكَ عَظِيماً }

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Abstract

Abnormal uterine bleeding (AUB) is overall the most common causes of gynecological visits in the perimenopausal age, involving about 15% of women. Endometrial assessment has traditionally been achieved by obtaining tissue for histological analysis utilizing blind in-patient dilatation of the cervix and curettage of the endometrium under general anesthesia Diagnosis and treatment of endometrial pathology can nowadays benefit from well-established techniques, ranging from clinical examination to transvaginal ultrasound (TVS), 3D ultrasonography and hysteroscopy .

Patients and methods: This study included 100 patients complaining of perimenopausal bleeding. All the selected patient had subjected to carefull history taking and then underwent general examination, local pelvic examination, office hysteroscopy transvaginal 2D pelvic ultrasound, 3D endometrial volume measurement and then dilatation and curettage (D&C) or hystroscopic guided biopsy for focal endometrial .

Those patients were divided into 2 groups based on the endometrial histopathology into:

- Group A patients with hyperplasia and malignant conditions.
- Group B patients with other causes of abnormal uterine bleeding.

Results: The age ranged between 41 and 50 years with a mean of 49.4 ± 1.22 years. They had a mean parity of 3.2 The most common bleeding pattern was menorrhagia In group 1 the most common endometrial histopathology was simple endometrial hyperplasia. In group 2 most common endometrial histopathology was disordered proliferative endometrium. In our study there was a high statistical significance as regard endometrial thickness in comparison of both groups; In group 1 endometrial thickness was 15.37 ± 2.27mm , while in group 2 it was 11.90 ± 2.97mm. As regards the measurement of endometrial volume, in our study there was a high statistical significance in comparison of both groups; in group 1 endometrial thickness was 14.11 ± 2.1cc, while in group 2 it was 7.67 ± 1.81cc. Also endometrial volume was significantly different when used to compare between atrophic endometrium and other benign endometrial pathology. As regards the results of hysteroscopy, it showed the highly statistical significance in the ability to differentiate between group 1 and 2. In group 1 it was able to detect 82% of hyperplasia cases and 100% of endometrial cancer cases while in group 2 it was able to detect 76% of cases.

Keywords:

Three Dimensional measurement of the endometrial volume, office hysteroscopy, endometrial biopsy perimenopausal bleeding,

List of Abbreviations

ABBREVIATIONS	DETAILS
2 D	Two-Dimensional.
3D	Three-Dimensional
17β-HSD	17 β - hydroxysteroid dehydrogenase
ACOG	American College of Obstetricians and Gynecologists
AUB	Abnormal Uterine Bleeding
BMI	Body Mass Index
CBC	Complete Blood Count
CEH	Complex Endometrial Hyperplasia
CT	Computerized Tomography
D&C	Dilatation And Curettage
DHEAS	Dehydroepiandrosterone Sulfate
DNA	Deoxyribonucleic Acid
DPE	Disordered proliferative Endometrium
EC	Endometrial Carcinoma
EIC	Endometrial Intraepithelial Carcinoma
EIN	Endometrial Intraepithelial Neoplasia
EMB	Endometrial Biopsy
EMP	Endometrial Polyp
FIGO	International Federation Of Gynecology And Obstetrics
FSH	Follicle-Stimulating Hormone
GNRH	Gonadotropin-Releasing Hormone
HCG	Human Chorionic Gonadotropin
HNPCC	Hereditary Non Polyposis Colorectal Cancer
IGFBPS	Insulin-Like Growth Factor Binding Proteins
IGFS	Insulin-Like Growth Factors

ISGP	International Society Of Gynecological Pathologists
IUD	Intrauterine Device
NPV	Negative Predictive Value
NS	Non Significant
PAI-1	Plasminogen Activator Inhibitor-1-
PCOS	Polycystic Ovary Syndrome
PG	Prostaglandin
PGE2	Prostaglandin E 2
PGF2α	Prostaglandin F2 Alpha
PGS	Prostaglandins
PID	Pelvic Inflammatory Disease
POP	Progestin-Only Pill
PPV	Positive Predictive Value
PR	Progesterone Receptor
RBCS	Red Blood Cells
RCOG	Royal College Of Obstetricians And Gynecologists
SEER	Surveillance, Epidemiology and End Results (source for cancer statistics in the United States)
SEH	Simple Endometrial Hyperplasia
SEM	Scanning Electron Microscopy
SHBG	Sex Hormone-Binding Globulin
SIS	Saline-Infusion Sonography
STRAW	Stages Of Reproductive Aging Workshop
TAS	Transabdominal Sonography
TNF-A	Tumor Necrosis Factor-A
TVS	Transvaginal Sonography.
VOCAL	Virtual Organ Computer-Aided Analysis
WHO	World Health Organisation

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Introduction
And
Aim of the work

Introduction

INTRODUCTION

Abnormal uterine bleeding (AUB) is overall the most common causes of gynecological visits in the peri- and postmenopausal age, involving about 15% of women. Besides systemic, iatrogenic or hormonal age-related causes, an endometrial pathology (polyps, sub- mucous myomas, endometrial hyperplasia, and endometrial carcinoma) should always be suspected, and evaluation appears to be mandatory (Nicholson W.K.etal., 2001).Diagnosis and treatment of endometrial pathology can nowadays benefit from well-established techniques, ranging from clinical examination to transvaginal ultrasound (TVS), 3D ultrasonography and hysteroscopy (Epstein E.,et.al.,2001).

The main advantage of hysteroscopy is to detect intracavitary lesions such as leiomyomas and polyps that might be missed using transvaginal sonography or endometrial sampling (Tahir et.al., 1999). In fact, some have advocated hysteroscopy as the primary tool for the diagnosis of abnormal uterine bleeding. Although it is highly accurate for identifying endometrial cancer, it is less accurate for endometrial hyperplasia. Thus, some recommend endometrial biopsy or endometrial curettage in conjunction with hysteroscopy (Clark, 2002).

Gruboeck et al. reported that the assessment of endometrial volume in women with postmenopausal bleeding was more accurate than endometrial thickness measurement for detecting endometrial pathology (Gruboeck et.al.,1996). Bonilla-Musoles and coworkers reported that 3D US improved the diagnostic accuracy of ultrasound to determine myometrial and cervical invasion in endometrial carcinoma (Bonilla M.F. et.al.,1997).

Aim of the work