TRANS VAGINAL US ASSESSMENT OF PREMALIGNANT AND MALIGNANT CHANGES IN ENDOMETRUIM IN POSTMENOPAUSAL BLEEDING

Essay

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استخدام الموجات فوق الصوتية المهبلية لتقييم التغيرات ما قبل الخبيثة و الخبيثة لبطانة الرحم في حالات النزيف الرحمي بعد سن اليأس

رسالة

مقدمة من الطبيبة / مي محمد علي يونس

توطئة للحصول على درجة الماجستير في الأشعة التشخيصية

السادة المشرفون

الأستاذ الدكتور / حسام فهمي

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الملخص العربى

يعرف النزيف الرحمي بعد سن اليأس هوأي نزيف من الجهاز التناسلي بعد عام كامل من انقطاع الطمث لدى النساء.

حيث يعد اي نزيف رحمي في اي سن مثير للقلق ولكن النزيف الرحمي بعد انقطاع الطمث هو مصدر قلق خاص لانه هو المؤشر الاول والاكثر شيوعا لسرطان بطانة الرحم .

وهناك عدة اسباب مختلفة تسبب النزيف منها فرط تنسج بطانة الرحم، سليلة الرحم ،سرطان الرحم و سرطان عنق الرحم .

التغيرات ما قبل الخبيثة في بطانة الرحم عن طريق التعرض المستمر لهرمون الاستروجين في وجود بعض العوامل مثل العقم والحيض المبكر وتأخر انقطاع الطمث وأمراض المبيض المتعدد الكيسات أو السمنة أو هرمون الاستروجين خارجي.

وقد أثبتت أساليب التشخيص المختلفة فائدتها للكشف عن خلل بطانة الرحم في النساء مع عدم انتظام نزيف الرحم. وتشمل علي التوسيع والكحت، منظارالرحم و فحص الرحم والمهبل بالموجات فوق الصوتية مع قياس سمك بطانة الرحم.

ولكن يعد إجراء الفحص بالموجات فوق الصوتية هو الخط الأول المناسب لتقييم بطانة الرحم لتحديد اي النساء معرضون لخطر الاصابة بسرطان بطانة الرحم حيث ان سمك بطانة الرحم بعد سن اليأس هو أرق بكثير مما كانت عليه في النساء

قبل انقطاع الطمث و تشير سماكة بطانة الرحم إلى وجود مرض ما حيث ان الحد الفاصل لسمك بطانة الرحم هو٥ مم.

في المرضى الذين يعانون من سمك بطانة الرحم نلجا الي اختبار ثانوي مثل الدوبلريمكن أن يلعب دورا في صقل التشخيص ويسمح على تقييم الأوعية الدموية الرحمية حيث يوجد علاقة جيدة بين الطول الموجي و سرعة التدفق للشريان الرحمي وتشخيص الأنسجة المريضة.

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Contents

List of Abbreviation

TVUS	:	Trans vaginal ultra sound
PMB	:	Post-menopausal bleeding
FIGO	:	International Federation of Gynecology and Obstetrics
a.	:	Artery
br.	:	Branch
ACOG	:	American College of Obstetricians and Gynecologists

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Introduction

Postmenopausal bleeding (PMB) is defined as any bleeding from the genital tract occurring in the postmenopausal period, arising after one year of amenorrhea in women of menopausal age, its incidence can be as high as 10% .***(Goodman, 2014)***

Abnormal uterine bleeding at any age in women's life is disruptive and worrisome, but postmenopausal bleeding is of special concern because it is the only common clinical indication of the presence of endometrial carcinoma. ***(Munot and Lane, 2008)***

The differential diagnosis of postmenopausal bleeding is wide, and includes, endometrial hyperplasia, endometrial polyp, endometrial carcinoma, cervical cancer and uterine leiomyosarcoma. ***(Appleton and Plavsic، 2012)***

The premalignant changes of the endometrium are caused by estrogen stimulation of the endometrium in the presence of risk factors. These risk factors are either major factors as obesity, delayed menopause or exogenous estrogen or minor factors as; infertility, an ovulatory cycles or polycystic ovary syndrome ***(Saso et al., 2011).***

Several different approaches have been proved to be clinically useful methods for detection of endometrial abnormality in women with irregular uterine bleeding. These include dilatation and curettage (D&C), hysteroscopy and trans vaginal sonography (TVS) with the measurement of endometrial thickness ***(Feldman, 2014).***

Trans vaginal ultrasound scan (TVUS) is an appropriate first-line procedure to identify which women with PMB are at higher risk of endometrial cancer. The mean endometrial thickness in postmenopausal women is much thinner than in premenopausal women. Thickening of the endometrium may indicate the presence of pathology. In general, the thicker the endometrium, the higher the likelihood of important pathology, i.e. endometrial cancer being present. The threshold is 5 mm; a thickness of >5 mm gives likelihood of endometrial cancer. ***(Hitt, 2010)***

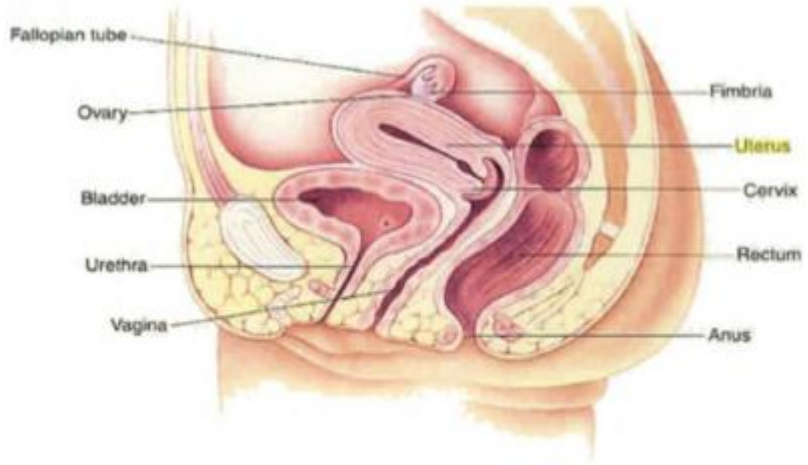
In patients with thickened endometrium a secondary test such as power Doppler could play a role in refining the diagnosis. Trans vaginal colour Doppler imaging allows the assessment of endometrial vascularization .A good correlation has been found between the uterine artery flow velocity waveform and the histopathological diagnosis in women with PMB. ***(De Kroon et al., 2010)***

Aim of the work

The aim of this work is to explore the value of transvaginal sonography as a screening technique for assessment of premalignant and malignant changes of the endometrium in postmenopausal bleeding.

Anatomy of the uterus

The uterus is a pear-shaped organ located in the female pelvis between the urinary bladder anteriorly and the rectum posteriorly. The average dimensions are approximately 8 cm long, 5 cm across, and 4 cm thick. The uterus is divided into 3 parts: the fundus, body, and cervix ***(figure 1.1) (Strauss et al., 2004).***



(Fig1.1): *Illustrated cross section of female pelvis* ***(Orfanoudaki et al., 2007).***

Viewed from the front, the uterus cavity is triangular in shape, which the base being formed by the internal surface of the fundus between the orifices of the uterine tubes and the apex by the internal orifice of the uterus through which the cavity of the body communicates with the canal of the cervix, The uterus is

divided into two main portions: body and cervix. About midway between the apex and base, a slight constriction known as **the isthmus**. The portion above the isthmus is termed **the body** and that below is **the cervix**. The part of the body which lies above the site of entry of the uterine tubes is known as **the fundus** and the area where the tubes join the uterus on each side is termed **the cornu** ***(figure 1.2)(Butler et al., 2012).***

(Fig1.2): *Illustrated uterine divisions* ***(Henningsen et al., 2004)***

The **cervix** is the lower part of the uterus that usually between 2 and 3 cm long and roughly cylindrical in shape ***(figure 1.3).*** The narrow cervical canal runs along its entire length, connecting uterine cavity and lumen of the vagina. The opening into the uterus called the internal os and the

opening into the vagina called the external os. The lower part of the cervix is known as the vaginal portion of the cervix (or ectocervix), bulge into the top of the vagina. The mucosa lining the cervical canal known as the endocervix and the mucosal covering the ectocervix is known as the exocervix. The cervix has an inner mucosal layer, a thick layer of smooth muscle, and posteriorly the supra vaginal portion has a serosal covering consisting of connective tissue and overlying peritoneum ***(Drake et al., 2005).***

(Fig 1.3): *cervix* ***(Orfanoudaki et al., 2007).***