Role of ultrasonography in diagnosis of Post-hysterectomy complications

Essay

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دور الفحص بالموجات فوق الصوتية في تشخيص المضاعفات الناتجة عن استئصال الرحم

رسالة

توطئة للحصول علي درجة الماجستير في الاشعة التشخيصية

مقدمة من

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Allam El Sayed Allam

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List of Abbreviations

LAVH	**:**	Laparoscopically assisted vaginal hysterectomy
LH	**:**	Laparoscopic hysterectomy
TLH	**:**	Total laparoscopic hysterectomy
TAU	**:**	Trans-abdominal ultrasound
TVU	**:**	Trans-vaginal ultrasound
EDF	**:**	End-diastolic volume
A	**:**	Peak systolic velocity
B	**:**	Diastolic velocity
PVR	**:**	Past-void residual urine volume
CDM	**:**	Color Doppler mapping
VTE	**:**	Venous thrombo-embolism
DVT	**:**	Deep venous thrombosis

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Introduction

Hysterectomy is one of the most common performed major operations by obstetricians and gynecologists ***(Seffah and Adanu, 2007).***

Gynecological indications for hysterectomy are varied and include both benign and malignant etiologies. Of benign indications, symptomatic leiomyomas and pelvic organ prolapse are the most frequent, although abnormal bleeding, endometriosis, chronic pain, and premalignant neoplasia are also relatively common ***(Hoffman, 2008).***

Hysterectomy may be completed using an abdominal, vaginal, or laparoscopic approach, and selection is influenced by many factors, For example, physical properties of the uterus and pelvis, surgical indications, presence or absence of adnexal pathology, surgical risks, costs, hospitalization and recovery length, and anticipated postoperative quality of life are all weighed once hysterectomy is planned. All three approaches are used commonly, and each carries distinct advantages and disadvantages ***(Hoffman, 2008).***

The postoperative period can be complicated by progression of the disease process that necessitated the hysterectomy, iatrogenic complications, Laboratory examinations and imaging techniques are necessary in many cases ***(Seffah and Adanu, 2007).***

Ultrasonography is a useful non invasive technique that permits accurate diagnosis of many intra-abdominal complications ***(Kansaria et al, 2002).***

- **Aim of the study:**

To determine the role of ultrasound in detection of different complications that may occur after hysterectomy.

The anatomy of the female pelvis

The pelvis is the area of transition between the trunk and the lower limbs. The bony pelvis serves as the foundation for the pelvic region and it provides strong support for the vertebral column upon the lower limbs. The pelvic cavity is continuous with the abdominal cavity; the transition occurring at the plane of the pelvic inlet the pelvic cavity contains the rectum, the urinary bladder, and the internal genitalia. The perineum is the region of the trunk that is located between the thighs. The pelvic diaphragm separates the pelvic cavity from the perineum. The perineum contains the anal canal, the urethra, and the external genitalia (vulva) ***(Patrick W. Tank, 2005).***

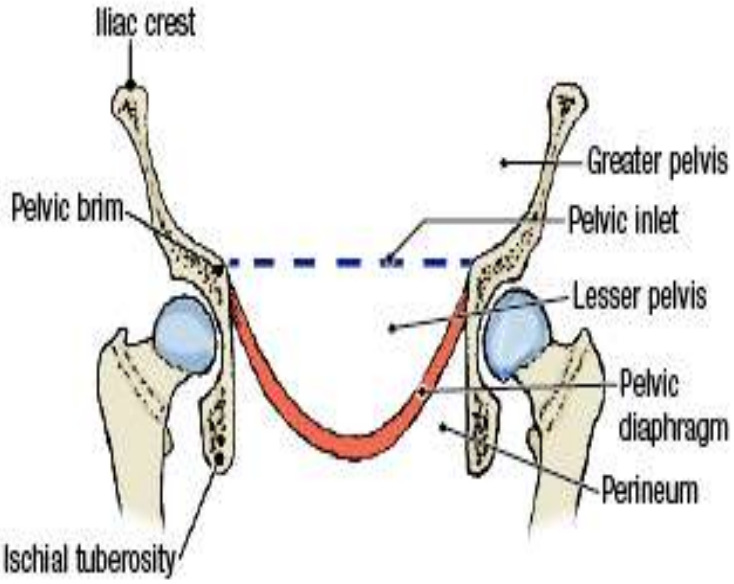

Figure (1): The pelvis on coronal section ***(Quoted from Grant's Dissector, 2005).***

Bony Pelvis, Pelvic Joints and ligaments

The bony pelvis is comprised of (1) The two hipbones, termed the (inominate bones); (2) The sacrum; (3) the coccyx.

The inominate bones consist of the ilium, ischium, and pubis, which fuse at the acetabulum that articulates with the femoral head. The ilium articulates with the sacrum posteriorly at the sacroiliac joint, and the pubic bones articulate with each other anteriorly at the symphysis pubis. The sacroiliac joint is a synovial joint that connects the sacrum and ilium. The symphysis pubis is a cartilaginous joint that connects the pubic bones by way of a fibro cartilaginous disk ***(Marlene M. Corton, 2008).***

The term ligament is used to describe dense connective tissue that connects two bones. However, the ligaments of the pelvis are variable in composition and function. They range from tough connective tissue structures that support the bony pelvis and pelvic organs to smooth muscle and loose areolar tissue that add no significant support. Of these the Sacro-spinous ligament, sacro-tuberous ligament, and anterior longitudinal ligament of the sacrum consist of dense connective tissue that joins bony structures and contribute to the stability of the bony pelvis. The round and broad ligaments consist of smooth muscle and loose areolar tissue, respectively). ***(Marlene M. Corton, 2008).***