SUMMARY AND CONCLUSION

This paper aimed at evaluation of the role of Ultrasonography and Multidetector Computed Tomography in diagnosis of different gynecological causes of acute pelvic pain.

From the previous chapters, we could summarize that Ultrasound is generally accepted as the first imaging modality used in patients with acute pelvic pain**.** The true value of ultrasound in acute pelvic pain lies in its ability to detect gynecologic disorders and effectively rule out other non-gynecological causes. Common gynaecological pathology involving the uterus, Fallopian tube and the ovary can be diagnosed with confidence.

Transvaginal sonography (TVS) is able to detect the exact location, number, size and the echo-architectural pattern of uterine fibroids. The diagnosis of adenomyosis and endometriosis sonographically was possible by means of TVS before surgery. TVS has its greatest advantage in the detection of the presence and number of adnexal cysts, in addition to characterization of their internal echo- architectural details as the presence of internal choes,ptations, reticulations, and fat-plug. Different forms of pelvic inflammatory disease and endometritis were depicted by TVS. It also provides a definitive diagnosis of ovarian hyperstimulation syndrome. TVS was highly specific in diagnosing ectopic pregnancy by exclusion of the presence of intrauterine gestational sac and demonstration of adnexal mass in most cases, and detection of intra and extra sacs with living embryo in the minority.

TVS, unlike Trans abdominal Sonography, has a minimal limitation in addition to great advantages in evaluation of gynecological causes of acute pelvic pain. TVS permits high resolution imaging of pelvic organs,

and was well accepted by all examined patients. It produces high-resolution images of the pelvic organs, providing reliable and reproducible information without the need for a full bladder needed in Transabdominal Sonography. Also patient's obesity, bony hadowing, abdominal scarring, surgical drains or sutures do not cause any difficulties during scanning.

The main limiting factor for the use of TVS is the virginity &the relatively small field of view. It was not possible to obtain a panoramic or global view of the pelvis, therefore large masses that extend to the upper portion of the pelvic cavity was not adequately visualized, thus Transabdominal US was more beneficial in those cases.

MDCT is another method of examination of female pelvis. Some gynecologic disorders that cause acute pelvic pain demonstrate characteristic MDCT findings. Therefore, MDCT is an important diagnostic tool in the assessment of female patients who present with acute pelvic pain. Familiarity with the spectrum of MDCT findings in these disorders will allow the radiologist to guide appropriate treatment of affected patients and may eliminate the need for further imaging evaluation, also MDCT was more valuable than the TVS in large masses.

The disadvantage of this technique is that the patient is exposed to large dose of radiation; also MDCT is relatively expensive in comparison to the TVS. Another disadvantage of MDCT is the necessity to oral preparation with contrast media and the hypersensitivity reactions to intravenous contrast media which would hinder its use in emergency cases.

Finally, we come to the conclusion that Transvaginal Ultrasonography was found to be superior to Transabdominal Ultrasonography in diagnosis of acute pelvic pain; however

Transabdominal US was an essential preliminary examination if a large field of visualization is needed.

If a gynecologic disorder could be confirmed, or the sonographic finding are equivocal MDCT is the imaging modality of choice .