ADVANCES IN PELVIC ULTRASOUND

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Learning Objectives

1. Discuss the advantages and limitations of transabdominal and transvaginal ultrasound in evaluation of female pelvis

2. List the indications for the use of pelvic ultrasound in the assessment of female infertility

3. Recognize typical ultrasound features of benign and malignant uterine and adnexal lesions
Discuss the advantages and limitations of TA and TV ultrasound in evaluation of female pelvis
List the indications for the use of pelvic ultrasound in the assessment of female infertility
Recognize typical ultrasound features of benign and malignant uterine and adnexal lesions
One Picture is Worth a Thousand Words

Rembrandt’s 1632 painting "The Anatomy Lesson of Dr. Nicolaes Tulp"
Assessment of the Menstrual Cycle
Early proliferative phase of the menstrual cycle
Periovulatory phase of the menstrual cycle
Early secretory phase of the menstrual cycle
Late secretory phase of the menstrual cycle
3D US of PCOS
A 34-year-old patient, G0 P0, presents with primary infertility, chronic pelvic pain and dysmenorrhea. You perform transvaginal color Doppler ultrasound and find the following finding:
Ovarian Endometrioma
Non-invasive Assessment of the Uterine Cavity
A 32-year-old patient (G3 P0120) presents with recurrent pregnancy loss. You perform 3D ultrasound and detect the following finding:
Subseptate Uterus
Septate Uterus
Bicornuate Uterus
Uterus Dydelphis
Unicornuate Uterus
A 38-year old infertile (G3P1021) patient presents to your office with secondary infertility, menorrhagia and vaginal spotting.
What is the best next step?
Saline Infusion Sonography
A 32-year old patient (G2 P1011) presents with prolonged menstrual bleeding and postcoital spotting. You perform Saline Infusion Sonography (SIS) by 3D US and find the following finding:
Endometrial Polyp
A 29-year old patient (G3 P0030) presents with secondary amenorrhea and secondary infertility. Her history is significant for 3 miscarriages at 8, 9 and 11 weeks gestation.
Asherman Syndrome
A 27-year-old patient, G0 P0, presents with a history of chronic dull pain in the lower abdomen. She has a past history of PID. You perform transvaginal US and find the following finding:
Hystero-Contrast-Salpingography
IUD Localization
Contraceptive Devices
A 34-year-old patient (G3 P2012) presenting with dysmenorrhea and bleeding in clots. What is the most likely diagnosis?
Severe Adenomyosis
A 48-year old patient (G2 P2002) presents with abnormal uterine bleeding and pelvic discomfort. What is the best next step?
Diffuse Endometrial Thickening

What is the most likely ovarian finding?
Functional Cyst - Dysfunctional Bleeding
A 32-year old patient (G1 P1001) presents with symptoms of abnormal uterine bleeding. What is the most likely diagnosis?
A 62 year old woman (G0 P0) visits a gynecologist because of abnormal genital tract bleeding. The endometrium is ill-defined, heterogeneous and measures 22 mm. Color Doppler depicts prominent vascularity.
Endometrial Carcinoma
A 19-year-old patient, G0 P0, presents with pelvic pain. What is the next most appropriate step?
Ovarian Tumors
Neovascular Signals
TRANSVAGINAL ULTRASOUND