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ABSTRACT BOOK

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As this a large field we will focus on HIP intervention procedures. These are include Biopsy, Injection, tumoral ablation, embolization and Cementoplasty.

An special focus in advanced US-guided procedures were done as a most available imaging modality that radiologist can do many of them in office base setup. We also briefly describe the relevant medications and principlesassociated with imaging-guided interventions.

Following this, we discuss individual procedures that are used to treat pain in the anterior, lateral, and posterior regions of the hip, with an overview of the relevant anatomy, common diseases, and various injection techniques.

Evaluation of Fallopian Tube Patency Infertility and ART Failure

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Up to one third of infertility and subfertility causes are due to impaired tubal patency. Tubal and peritoneal diseases are the main causes of infertility. Tubal pathology can either be congenital malformation or acquired; proximal or distal; unilateral or bilateral; and, transient or permanent. Several imaging methods such as laparoscopy, fluoroscopy, saline infusion sonography, and hysterosalpingography (HSG) have been used to assess tubal and peritoneal pathology. Although laparoscopy is the modality of choice for investigating tubal patency and pelvic structure in many infertility centers, HSG is usually the initial diagnostic method for infertility workup because of its ease of performance, accuracy, and minimal risk of complications. HSG provides useful information about the size, contour, and anatomy of the inner surface of the fallopian tubes and is the gold standard for evaluation of tubal lumen. Tubal and peri-tubal pathology show various imaging manifestations on HSG. In this lecture we will discuss the radiographic features of congenital and acquired structural abnormalities of the tubal pathology, and the etiologies of occlusion or obstruction.

Isthmocele

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Isthmocele, also is called “Niche”, “Pouch”, or” Uterine scar defect” develops when the cesarean section incision dose not heal completely.

In general, most isthmoceles are

asymptomatic being found incidentally on ultrasound examination. Symptoms including AUB, postmenstrual spotting, dysmenorrhea, pelvic pain, and infertility have now been associated with isthmocele. Obstetric complications of isthmocele were described in the literature, such as placenta accrete, placenta previa, scar dehiscence, uterine rupture and C.S-EP. The association between isthmocele and secondary infertility has been reported.

Various imaging methods including TVS, SHG, MRI, can be used to diagnosis isthmocele. TVS is the initial most usual method. The standard diagnosis procedure for identification of isthmocele is transvaginal sonography (TVS), however, sonohysterography has been proven to be an at least equally apt alternative method. The defect has been described on TVS as an anechoic triangle defect in the myometrium with the base communicating to the uterine cavity.

Some authors have classified the findings according to the size of the defect, a large defect is described as a myometrial reduction of >50% of the wall of the thickness. A large defect may also be classified as residual myometrium (RM) < 2.2 mm by TVS and < 2.5 mm by SHG.

Role of Imaging in Differentiation Between Malignant and Benign Uterine Mass

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Uterine sarcomas are rare malignant tumors arising from the mesenchymal tissues of the uterus such as the endometrial stroma, uterine muscle and connective tissue. They represent 1% of female genital tract malignancies and 3–7% of all uterine malignances. It is estimated that 0.1–0.3% of patients operated on for presumed uterine leiomyoma have a uterine sarcoma.

Misclassifying a sarcoma as a benign leiomyoma may result in no or delayed treatment or surgical treatment that is inappropriate, which would be highly likely to impact negatively on prognosis. Subjective assessment of ultrasound images could help differentiate between benign and malignant myometrial tumors.

Uterine sarcomas typically appear as solid masses with inhomogeneous echogenicity, sometimes with irregular cystic areas but only very occasionally with fan-shaped shadowing. Most are moderately or very well vascularized. There are seven ultrasound features can help differentiating leiomyosarcoma from benign leiomyoma. They include irregular tumor border, loss of normal myometrium, loss of typical benign leiomyoma feature, necrosis, cystic degeneration, absent or minimal circumferential vascularity and minimal or moderate intralesional vascularity. Diagnosis of suspected uterine leiomyosarcoma requires five out of these seven features present, four gray-scale and one color Doppler ultrasound.

A diagnostic algorithm including diffusion-weighted MRI criteria may help distinguish uterine sarcoma from atypical leiomyoma. An MRI diagnostic algorithm that included enlarged lymph nodes, peritoneal implants, high diffusion-weighted MRI signal greater than that in endometrium, and apparent diffusion coefficient less than or equal to 0.905 × 10−3 mm2/sec enabled identification of leiomyosarcoma.