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FRIDAY, 14 JUNE 2019

13:30:00 – 15:00:00

Ultrasound basic II

SP0133 HOW TO ASSESS US LESIONS FOR GOUT + DEMO

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Gout is the most common inflammatory joint disease in Western developed countries. Diagnosis and monitoring have historically been based upon clinical assessment combined with biochemical results (primarily p-urate) but over the last decade ultrasonography (US) has received increasing attention for these purposes. US has been shown able to detect monosodium urate deposits in both joints and tendons. In 2015 the Outcome Measures in Rheumatology (OMER-ACT) US Working Group developed definitions of structural lesions in gout. These include double contour sign (deposits of crystals on the surface of cartilage), tophus (larger hyper-echoic aggregation of crystals), aggregates (small hyper-echoic deposits) and erosion (1). The double contour sign has been included in the ACR/EULAR 2015 gout classification criteria as a way to visualize urate deposits in joints (2). Furthermore, US can visualize potential concomitant inflammatory aspects of gout since it can visualize both joint inflammation and tenosynovitis.

In this talk the diagnostic properties of US will be described and the potential risk of false positive results due to artefacts or misinterpreted lesions will be discussed. Furthermore, the potential role of US in monitoring of treatment response will be explored.

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SP0134 US FOR TROCHANTERIC PAIN SYNDROME – CLINICAL USE + DEMO

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Background: Greater trochanteric pain syndrome (GTPS) is a clinical diagnosis with the typical presentation of chronic intermittent lateral hip/thigh/buttock pain, aggravated with activity and when lying on the affected side. There is a lack of valid/specific diagnostic criteria for GTPS. GTPS can be attributed to a multitude of causes ranging from tendinopathy and/or rupture of the gluteal tendons and/or bursitis, to pathological alterations of the iliotibial band/fascia lata and other nearby anatomical structures located on the lateral part of the hip. To further complicate the diagnostic process, according to different studies, the prevalence of GTPS in adults with lower back pain has been found to be between 20-30%. Alterations of the lumbar biomechanics may interfere in the range of internal rotation of the hip and consequently produce a GTPS and vice versa. Changes in hip range of motion will trigger changes in the dynamics of lower extremities and the spine.

Generalized myofascial pain can also be a source of confusion when evaluating patients with GTPS.

Objectives: Understand the clinical anatomy of the lateral hip.

Interpret the US images of the lateral hip

Identify potential pain generators of the lateral hip.

Methods: The study of the static and dynamic sonoanatomy of the different components of the lateral region of the hip can contribute in a relevant way to clarify the diagnosis. In the eular guidelines of sonographic musculoskeletal (MSUS) exam published in 2017, the sonographic exam of the lateral hip has been developed in detail and will be discussed during this lecture.

The anatomy against what is often thought is not stagnant knowledge but evolves over the years providing new and useful data applicable in daily clinical practice. The anatomy, both static and dynamic, of the trochanteric region, is complex. For example, the subgluteus maximus bursa, which is frequently incriminated in the GTPS, is located in the posterior facet of the greater trochanter and is related to the iliotibial tract, the fascial contributions of the gluteus maximus and the tensor of the fascia lata muscle to the iliotibial tract and the origin of the vastus lateralis. In order to understand the multifunction and relationships of the different structures of this region means one has to have seen images of them and for that purpose, the human cadaveric dissection is the best tool. Thanks to the fact that the speaker is involved as a professor in the anatomy department at the University of Barcelona, Bellvitge campus, directed by prof M Miguel, the clinical anatomy part will be developed with real dissections made specifically for this lecture.

Results:

Conclusion: Knowledge of the clinical anatomy needed to understand the relationships between the different structures, the clinical history, and physical examination of GTPS patients and the therapeutic possibilities including ultrasound-guided injections are other steps that lead to an accurate diagnosis of GTPS

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SP0135 HOW TO DIFFERENTIATE MINIMAL DISEASE ACTIVITY IN RA + DEMO

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Ultrasound (US) is increasingly utilised as a point-of-care tool to diagnose early inflammatory joint disease, monitor treatment response and detect subclinical inflammation. This is feasible as US can detect joint, and tendon, inflammation before it becomes clinically apparent. Despite the increasing use of US in Rheumatology, the key research question yet to be addressed is defining 'the normal reference value at the joint level.'

Improvement in US technology over the last decade results in acquisition of higher resolution images. US can now detect subtle abnormality in joints of healthy individuals who are asymptomatic. Consequently, the imaging boundary between US changes of normal joints (i.e. *physiological changes*), and those of early arthritis joints (i.e. *early pathological changes*) has become unclear. In addition, a proportion of US-defined pathology observed in normal joints may be attributed to age-related changes.