MRI DIFFICULT CASES OF THE AXIAL SKELETON

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MRI has revolutionized the assessment of axial spondyloarthritides (SpA) in clinical practice. MRI of the sacroiliac joint is a cornerstone for diagnosis and classification, MRI of the spine may help with difficult cases as spinal changes may antedate sacroiliac changes and indicate disease burden. In daily practice, however, the interpretation of axial MRI is challenging. Experience has tempered the initial enthusiasm as the limitations of the ASAS criteria in daily practice become evident.

Firstly, the ASAS criteria are intended to classify patients with ‘back pain’ of more than 3 months’ duration and with onset before 45 years of age as having axial SpA. In other patient groups, however, sacroiliitis on MRI as defined by ASAS has a lower sensitivity and specificity.

Secondly, the definition of a ‘positive’ MRI for sacroiliitis is validated to limited extend only. MRI of the sacroiliac joint requires inflammatory changes to meet the criteria, without a clear quantitative requirement. Bone marrow edema lacks sensitivity and specificity as MRI findings suggestive of sacroiliitis may be produced by non-inflammatory disorders, a point that remains poorly investigated.

Thirdly, structural changes in the sacroiliac joints are not taken into account in the ASAS criteria. The diagnostic performance of MRI of the sacroiliac joint could be improved by including structural lesions, but to date this is not the case.

Fourthly, spinal imaging is not included in the ASAS criteria. MRI of the spine is considered ‘positive’ when at least 3 inflammatory or several structural lesions are present, with a sensitivity and specificity similar to those of the sacroiliac joints. The difficulty here is the lack of data. It has not been reliably shown that inflammation precedes syndesmophyte formation and MRI seems incapable of accurately evaluating treatment response. Only about 4% of patients with ‘negative’ sacroiliac MRI are reclassified based on positive spinal MRI findings.

Clinicians should be aware of unreasonable expectations on MRI. If MRI findings are considered in isolation the findings are not reliable. The diagnosis of SpA can only be made by an expert if patient’s history, clinical examination, laboratory findings, and imaging studies converge. When solving difficult cases, collaboration is key: clear communication between rheumatologist and radiologist is mandatory. Radiologists should withstand the pressure to call if a patient has SpA or not based on MRI alone.

REFERENCE:

Disclosure of Interests: None declared

THURSDAY, 13 JUNE 2019
15:30:00 – 17:00:00
Ultrasound advanced I

US FOR ASSESSING LUNG INVOLVEMENT IN RHEUMATIC DISEASES – CLINICAL USE + DEMO

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Background: Evaluation of interstitial lung disease (ILD) is always difficult (low sensitivity for X-ray and pulmonary function tests or high level of radiation for HRCT); ultrasound (US) has recently shown interesting results on truth, discrimination and feasibility. Due to the thickening of interlobular septa for edema or fibrosis, US beam can interact with those structure and produce artifacts on the screen: B-lines (BL) and pleural line irregularity (PLI). A positive correlation between BL and HRCT has been established both in systemic sclerosis patients and in other patients with ILD; more recently similar results have been published by using PLI as a finding for US assessment in patients.

BL has been recently defined by the OMERACT as a vertical hyperechoic reverberation artifact that arise from the pleural line, extend to the bottom of the screen without fading, and move synchronously with lung sliding, while PLI has been defined as a loss of regularity that may be associated with an increase in thickness, focal, diffuse, or nodular.

A low number of BLs has been described in healthy subjects but they are generally confined to the posterior and lower part of the thorax.

Up to now, many different scanning protocols have been used to assess BL or PLI in patients, providing similar results.

Conclusion: US lung evaluation is a useful and feasible imaging technique.

Disclosure of Interests: Andrea Delle Sedie Speakers bureau: Abbvie, UCB, Celgene, MSD

THURSDAY, 13 JUNE 2019
17:30:00 – 19:00:00
Fighting and fixing: from initiation to resolution of inflammation

T LYMPHOCYTES AND INNATE IMMUNE CELLS BALANCE MUSCLE REGENERATION AND AUTOIMMUNITY

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Background: The skeletal muscle is the largest cellular compartment of the organism. It represents an immunologically unique or a “non classical” immunological privileged site, being normally protected from the noxious effects of inflammation. The molecular events that control the homeostatic response to acute muscle injury are however poorly understood. The available information indicates that it involves the cross-talk among various cell populations, which i) perceive the muscle damage and release alert signals, which attract and activate inflammatory cells and T-cells and ii) organize an immune and tissue repair response.

The scenario is possibly even more complex during inflammatory idiopathic myositides (IMI) in which the immune privilege fails to protect the environment and