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THU0527

FREQUENCY AND ANATOMIC DISTRIBUTION OF MAGNETIC RESONANCE IMAGING LESIONS IN THE SACRO-ILIAC JOINTS OF HEALTHY SUBJECTS AND PATIENTS WITH SPONDYLOARTHRITIS

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Background: Lesions detected by magnetic resonance imaging (MRI) of the sacroiliac joints are critical to the diagnosis of non-radiographic axial spondyloarthritis (1). However, some lesions, such as bone marrow edema (BME), usually observed in patients with spondyloarthritis may be encountered in other conditions. BME have been described in patients with non-specific back pain, healthy subjects, women with postpartum and in athletes (2). Moreover, it has recently been shown that structural lesions of the sacroiliac joint, such as erosions and fat metaplasia, may be present in healthy subjects (3).

Objectives: To evaluate and compare the frequency and location of lesions (BME, subchondral condensation, fat metaplasia, erosions and ankylosis) on MRIs of the sacroiliac joint of healthy individuals and patients with spondyloarthritis.

Methods: This is a retrospective study conducted at the University Hospital of Besançon including 200 patients, each having received an MRI of the sacroiliac joints in coronal section and in T1 and Semicoronal short tau inversion recovery sequences. Two experienced readers evaluated the whole set of images to detect erosions, subchondral condensation, fat metaplasia, BME and ankylosis according to the definitions established by the Assessment of SpondyloArthritis MRI working group. We subdivided a sacroiliac joint into three segments, upper, middle and lower along the cranio-caudal axis. Within the middle segment, we retained 3 portions: anterior, intermediate, posterior along the ventro-dorsal axis. Overall, one sacroiliac joint contained five quadrants on the iliac side and five quadrants on the sacral side.

Results: Collected MRI of 200 patients (62% female), 96 patients had spondyloarthritis (mean age 37.4±11.8 years, 48% HLA-B27+), 104 subjects were unaffected by the disease (mean age 39.9±11.6 years, 11% HLA-B27+). Of the 96 spondyloarthritis patients, 62 (65%) had inflammatory buttock pain compared to 26 (25%) in the group without spondyloarthritis. BME was seen in 62 (65%) patients with spondyloarthritis mainly in the iliac quadrant of the intermediate middle segment and in 21 (20%) patients without spondyloarthritis predominantly in the antero-middle quadrant. There were equal BME in women and men with spondyloarthritis. Subchondral condensation occurred in 45% of patients without spondyloarthritis, mostly in the antero-middle quadrant and in 36% of patients with spondyloarthritis. Fat metaplasia was present in 35% of spondyloarthritis patients and in 23% of control patients. Erosions were seen in 31% of healthy patients and in 61% of patients with spondyloarthritis.

Conclusion: In this large retrospective cohort, we observed a significant frequency of inflammatory but also structural lesions on MRIs of sacroiliac joints from healthy patients, which could lead to the misdiagnosis of spondyloarthritis. Fine identification of the location of these lesions is crucial to avoid erroneous diagnosis.

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NAILFOLD VIDEOCAPILLAROSCOPY REPORTING IN CLINICAL RESEARCH: INTERNATIONAL DELPHI BASED CONSENSUS

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Background: Nailfold capillaroscopy (NVC), a non-invasive technique to assess microcirculation, is increasingly being incorporated into rheumatology routine clinical practice. Currently, the degree of description of NVC methods varies amongst research studies, making interpretation and comparison between studies challenging. In this field, an unmet need is the standardization of items to be reported in research studies using NVC.

Objectives: To perform a Delphi consensus on minimum reporting standards in methodology for clinical research, based on the items derived from a systematic review focused on this topic.

Methods: The systematic review of the literature on NVC methodology relating to rheumatic diseases was performed according to PRISMA guidelines (PROSPERO CRD42018104660) to July 22nd 2018 using MEDLINE, Embase, Scopus. Then, a three-step web-based Delphi consensus was performed in between members of the EULAR study group on microcirculation in rheumatic diseases and the Scleroderma Clinical Trials Consortium. Participants were asked to rate each item from 1 (not appropriate) to 9 (completely appropriate).

Results: In total, 3491 references were retrieved in the initial search strategy, 2862 were excluded as duplicates or after title/abstract screening. 632 articles were retrieved for full paper review of which 319 fulfilled the inclusion criteria. Regarding patient preparation before the exam, data were scarce: 38% reported acclimatization, 5% to avoid caffeine and smoking, 3% to wash hands and 2% to avoid manicure. Concerning the device description: 90% reported type of instrument, 77% brand/model, 72% magnification, 46% oil use, 40% room temperature and 35% software for image analysis. As regards to examination details: 76% which fingers examined, 75% number of fingers examined, 15% operator experience, 13% reason for finger exclusion, 9% number of images, 8% quality check of the images and 3% time spent for the exam. Then, a three-round Delphi consensus on the selected items was completed by 80 participants internationally, from 31 countries located in Australia, Asia, Europe, North and South America. Some items reached the agreement at the second round (85 participants), and other items were suggested as important to consider in a future research agenda (e.g. temperature for acclimatization, the impact of smoking, allergies at the application of the oil to the nailbed, significance of pericapillary edema, methods of reporting hemorrhages, ramified and giant capillaries). The final agreement results are reported below: