COMPARISON OF CLINICAL PHENOTYPE, SEROLOGICAL CHARACTERISTICS AND HISTOLOGIC FEATURES OF MALES VS FEMALES PATIENTS WITH PRIMARY SJÖGREEN’S SYNDROME (pSS)

Loukas Chatzis1, Aliki Venetsanopoulou1, Mary Pappa1, Athanasios Tzioufas1, Andreas Goules1, Athens School of Medicine, National and Kapodistrian University of Athens, Athens, Greece; Pathophysiology, Athens, Greece

Background: Primary Sjögren’s syndrome (pSS) is a female predominant autoimmune disease and very few studies have been conducted to address the phenotypic and laboratory differences of the disease between the two genders.

Objectives: To investigate whether gender in pSS interferes with clinical manifestations, serology, disease course and lymphoma development, in the largest cohort of pSS males in Greece.

Methods: From a cohort of 588 consecutive pSS patients who fulfill the 2016 American College of Rheumatology (ACR)/European League Against Rheumatism (EULAR) classification criteria, 33 males were included in the study. Every male was matched with a female in a 1:2 ratio, according to age at disease onset and disease duration. A 3 year age deviation was permitted. Glandular (dry mouth, eye dryness, parotid gland enlargement) and extra-glandular manifestations (Raynaud’s phenomenon, lymphadenopathy, arthralgia/arthritis, palpable purpura, liver involvement, kidney involvement, lymphoma) as well as serology (anti Ro/SSA, anti La/SSB, rheumatoid factor, cryoglobulinemia, low C4 complement levels) and histologic features (focus score, presence of germinal centers) were recorded and compared. Statistical analysis for categorical data was performed by Fisher exact test in SPSS software version 22.0.

Results: The median age of disease onset was 52 years (range: 15-71 years) for the male group and 50 years (range: 15-72 years) for the females. The median disease duration was 8 years (range: 0-26 years) and 7 years (range: 0-26 years) for males and females respectively. Anti-La/SSB antibodies were found in statistically significantly higher frequency in males compared to female patients [21/33 (63.3%) vs 23/66 (34.8%), respectively, p<0.009]. A similar trend was observed regarding anti-Ro/SSA antibodies [26/32 (81%) for males vs 44/64 (68%) for females] and a tendency to develop lymphomas [6/33 (18%) for males vs 6/65 (9%) for females] compared to females.

Conclusion: Joint examination and MRI were mostly concordant in MTP- and MCP-joints. In MTP-joints MRI-detected subclinical joint inflammation was infrequent (5% of MTP-joints) and in part caused by extra-articular inflammation without MRI-detected joint inflammation according to RAMRIS was also infrequent (25% of MTP-joints) and in part caused by extra-articular inflammation such as intermetatarsal bursitis. Further detailed imaging studies are needed to determine if extra-articular inflammation at the level of MTP-joints, with or without concomitant intra-articular inflammation, is a novel finding that is characteristic for early RA.


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Diagnoses and imaging procedures

HOW ACCURATE IS PHYSICAL JOINT EXAMINATION OF THE MTP-JOINTS, AND WHAT CAN WE LEARN FROM ADDITIONAL MAGNETIC RESONANCE IMAGING ON FOREFOOT INVESTIGATION IN EARLY ARTHRITIS?

Yousra Dakkak1, Aled Beer2, Debbie Boeters3, Monique Reijnierse1, Annette van der Helm - van Mil5,4,6,7, Leiden University Medical Center (LUMC), Rheumatology, Leiden, Netherlands; 2Leiden University Medical Center (LUMC), Radiology, Leiden, Netherlands; 3Erasmus University Medical Center, Rheumatology, Rotterdam, Netherlands

Background: Magnetic resonance imaging (MRI) is known to be more sensitive upon physical examination with MRI-detected inflammation of metatarsophalangeal-(MTP)-joints is scarce, which is surprising as physical examination of these joints is generally considered more challenging than of MCP-joints.

Objectives: We aimed to study the concordance and discordance of arthritus upon physical examination with MRI-detected inflammation of MTP-joints. Analyses on MCP-joints were included for comparison.

Methods: 1764 MTP(2)-joints and 1764 MCP(2)-joints of 441 consecutive patients presenting with early inflammatory arthritis (36% RA, 64% other inflammatory arthritides) underwent physical examination (PE) of joint swelling and 1:5 contrast-enhanced MRI of unilateral MCP- and MTP-joints. MRI-detected synovitis based upon signal intensity was scored according to the RA-MRI score (RAMRIS), and tenosynovitis according to Haavardsholm by two experienced readers (scores ranged 0-3). Analyses were done on joint level and joints were grouped as PE+MRI+, PE−MRI−, PE−MRI+ and PE+MRI−. PE+MRI+ positivity required the presence of the same MRI-inflammatory feature on joint level that was scored by both readers: ≥1. In addition, to be classified as PE+MRI−, the joints required to have clinical swelling as objectively by two independent observers. After categorisation, the MRLs of the joints that were PE+MRI− were further studied by two other, independent observers among whom an experienced musculoskeletal radiologist, to investigate the presence of contrast-enhancement that was not scored according to RAMRIS guidelines.

Results: Physical examination of joints and MRI were concordant in 79% of MTP-joints (60% PE+MRI+ and 19% PE−MRI−). In MTP-joints this was 71% (15% and 56% respectively). Next discordance was studied. Subclinical joint inflammation (PE+MRI+) was present in 14% (n=248) of MTP-joints. This was less frequent than in MCP-joints, where subclinical inflammation was present in 27% joints (n=465, p<0.001). Discordance in the opposite direction (PE−MRI+) was present in 5% of MTP-joints (n=78). This was observed more frequent than in MCP-joints (3%, n=44 joints, p<0.001).

Subsequently, the MRLs of the joints that were clinically inflamed and scored negative according to RAMRIS were studied for other MRI-irregularities. Out of the 78 MTP-joints that were PE−MRI−, 54% (n=42) showed no MRI abnormalities, whereas in 46% (n=36) extra-articular contrast-enhanced lesions were observed that were predominantly identified as peri-arthritis and intermetatarsal bursitis. Within this category, extra-articular inflammation was more prevalent in RA than in other inflammatory arthritides (58% vs 26%, p<0.005). At the MOPs no extra-articular inflammation was found.

Conclusion: Joint examination and MRI were mostly concordant in MCP- and MTP-joints. In MTP-joints MRI-detected subclinical joint inflammation was infrequent (14%), especially when compared to MCP-joints (27%). Clinical joint swelling without MRI-detected joint inflammation according to RAMRIS was also infrequent (5% of MTP-joints) and in part caused by extra-articular inflammation such as intermetatarsal bursitis. Further detailed imaging studies are needed to determine if extra-articular inflammation at the level of MTP-joints, with or without concomitant intra-articular inflammation, is a novel finding that is characteristic for early RA.

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ONE-YEAR PROGRESSION OF EROSIIVE DISEASE EVALUATED WITH HIGH-RESOLUTION PERIPHERAL QUANTITATIVE COMPUTED TOMOGRAPHY IN PATIENTS WITH ANTI-CITRULLINATED PEPTIDE ANTIBODIES AND ARTHRALGIA

Kresten Krarup Kjeller1,2,3, Jesper Skovhus Thomsen1, Kristian Stengaard-Pedersen1,2,3, Josephine Therkildsen1, Andreas Wiggers Nielsen1, Berit Schiøttz-Christensen1, Lone Svendsen1, Merete Graakjær1, Peter Mosborg Petersen1, Barbara Unger1, Geren Geil Kjær1, Bente Langdahl1,2, Ellen Margrette Hauge1,2,4, 1Aarhus University Hospital, Department of Rheumatology, Aarhus, Denmark; 2Falkenberg Regional Hospital, Diagnostic Centre, Sikeborg, Denmark; 3Aarhus University, Department of Biomedicine, Aarhus, Denmark; 4Aarhus University, Department of Clinical Medicine, Aarhus, Denmark; 5Sjøvejen Center of Southern Denmark, Middelfart, Denmark; 6Private Rheumatology Practice, Skanderborg, Denmark; 7Clinic of Rheumatology, Aarhus, Denmark; 8Randers Regional Hospital, Department of Internal Medicine, Randers, Denmark; 9Horsens Regional Hospital, Horsens, Denmark; 10Aarhus University Hospital, Department of Endocrinology, Aarhus, Denmark

Background: Bone erosions are common at diagnosis of rheumatoid arthritis (RA). However, bone erosions in preclinical RA (pre-RA) are not well described, and have not been studied prospectively.

High resolution peripheral quantitative computed tomography (HR-pQCT) has a spatial resolution of 82 μm and may therefore be ideal to detect bone erosions.

Objectives: To evaluate erosive progression with HR-pQCT in anti-citrullinated peptide antibody (ACPA) positive patients with arthritis compared with healthy subjects.
