Objectives: To assess the extent of structural joint involvement in proximal interphalangeal joints (PIP), hand and wrist: E, BME, S, TS and peritendinitis (PT) by MRI, in patients diagnosed with SLE with hand arthritis or arthralgia.

Methods: All patients with SLE who manifested hand pain and/or swelling in the prior 6 months were consecutively included in the study. They were divided into two groups: arthritis or arthralgia, according to the physical examination by an expert rheumatologist. All patients underwent an MRI with contrast injection on the non-dominant hand. The images obtained were evaluated following RAMRIS criteria extended to PIP and Tenosynovitis score for RA by two expert musculoskeletal radiologists, blind to the groups.

Results: 32 patients were included: arthritis: n = 13, arthralgia: n = 19, with a mean age of 50.91 ± 13.37 years and a disease evolution time of 10.21 ± 8.26 years. The average SLEDAI score 6.30 ± 4.40 for the arthritis groups and 3.79 ± 2.14 for the arthralgia group. The average SLICC score was 0.23 ± 0.42 in the arthritis group and 0.1 ± 0.31 in the arthralgia group. E was found in 7 patients with arthritis (53.84%) (15.38% in PIP, 0% in hand and 53.84% in wrist) and in 13 patients with arthralgia (68.42%) (0% in PIP, 10.52% in hand and 68.42% in wrist). BME was observed in 4 patients with arthritis (30.76%) (76.9% in PIP, 0% in hand and 30.76% in wrist) and in 5 patients with arthralgia (26.31%) (5.26% in PIP, 10.52% in hand and 15.78% in wrist). S was observed in 12 patients with arthritis (92.30%) (61.58% in PIP, 76.92% in hand and 84.61% in wrist) and in 8 patients with arthralgia (42.10%) (31.57% in PIP, 36.84% in hand and 36.84% in wrist). TS was observed in 6 patients with arthritis (46.15%) (38.46% in flexor tendons and 23.07% in extensor tendons) and in 8 patients with arthralgia (42.10%) (31.57% in flexor tendons and 21.05% in extensor tendons). PT was found in 6 patients with arthritis (23.07%) and in no patient with arthralgia (0%).

Conclusion: MRI allows us to diagnose musculoskeletal involvement in SLE, morphologically similar to rheumatoid arthritis (erosion, bone marrow edema, synovitis and tenosynovitis), which usually are underestimated on plain radiography. This study also shows the important erosive burden of arthritis in SLE, which has not been well characterised yet. In addition, it demonstrates the underestimated of physical examination to diagnose active inflammatory damage, such as subclinical synovitis, in patients with inflammatory arthralgias.

References:

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