Ultrasonography in the diagnosis of lower limb entheseal affection in a cohort of systemic lupus erythematosus patients: relation to the disease activity

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Background: Systemic lupus erythematosus (SLE) is a chronic inflammatory autoimmune disease characterized by variable clinical manifestations due to different organ involvement. Musculoskeletal involvement is extremely common in patients with SLE. Musculoskeletal ultrasound (MSUS) is an important tool for evaluation of patients with inflammatory arthritis and early detection of subclinical inflammation at the joint, tendon and entheseal level.

Objectives: To investigate the presence of entheseal abnormalities in SLE patients and correlating it with parameters of disease activity.

Methods: In this cross-sectional study we evaluated 50 patients with SLE who fulfilled the 2012 ACR/SLIICC criteria. Patients underwent clinical laboratory and ultrasonographic examination of both lower limbs at the sites of entheses. Disease activity was assessed by using the SLE disease activity index (SLEDAI). The scanned entheses were those included in the Glasgow Ultrasound Enthesitis Scoring System (GUESS)1. The anatomical sites were scanned bilaterally, both in longitudinal and transverse planes, in grey-scale (GS) and power Doppler (PD) mode. Ultrasonography was performed using (esatoe) MyLabTMsix ultrasound machine, equipped with a 6-18 MHz linear probe.

Results: In our cohort of 50 SLE patients we found 29 patients had clearly evident MSUS features of enthesopathy (58%) and 16 patients with minimal and isolated entheseal abnormalities (32%). Five patients had normal MSUS findings with no evidence of enthesal affection (10%). The mean of total GUESS score of all patients was 3.54 ± 2.6. MSUS examination of the quadriceps tendon insertion at the patella revealed mean thickness of 5.89 ± 0.7 mm, the patellar tendon attachment at the patellar (proximal) was 4.26 ± 0.84 mm and the mean thickness of the patellar tendon at the tibial insertion (distal) was 4.08 ± 0.7 mm. The Achilles tendon insertion at the superior pole of calcaneus and the plantar fascia insertion at inferior pole of calcaneus were 4.2 ± 0.7 and 3.7 ± 0.7 mm respectively. Age, body mass index (BMI), SLEDAI score, and ESR had a highly significant positive correlation with GUESS score. The increase in BMI, SLEDAI score and creatinine had an independent effect on increasing GUESS score.

Conclusion: Lower limb entheseal affection is common in SLE patients and considered one of the important causes of knee and ankle joints pain. Entheseal involvement in SLE patients is affected by variable parameters, mainly disease activity. Entheseal abnormalities can be early detected by ultrasonography even in clinically asymptomatic SLE patients without evidence of clinical symptoms and/or signs of enthesal affection.

REFERENCES:


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THE SLE DISEASE Activity SCORE (SLE-DAS) enables Accurate definitions of SLE remission and LDA as achievable targets in disease MANAGEMENT

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Background: The treat-to-target strategy in Systemic Lupus Erythematosus (SLE) aims to achieve remission. However, to define a target based on the C-2 Disease Activity Index (SLEDAI) is questionable, due to its limitations (especially its dichotomous nature). The SLE Disease Activity Score (SLE-DAS) is a recently validated continuous disease activity score which has a higher accuracy in measuring SLE activity and a higher sensitivity-change to compared to SLEDAI1. Objectives: To assess the ability of SLE-DAS to define SLE remission and other disease activity states. Methods: Cross-sectional study of SLE patients fulfilling the ACR97 and/or SLICC/IC classification criteria and followed at the Padua Lupus Clinic from March to June 2018. At each outpatient visit, the attending clinician scored SLE disease activity (in the last 30 days) using Physician Global