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AB1161 ULTRASOUND IMAGING IN EVALUATION OF ENTHESITIS: STATUS AND PERSPECTIVES

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Background: The high-frequency ultrasound is a reliable method to identify enthesitis, including subclinical and early diagnosis, in patients with psoriasis (Pso) and psoriatic arthritis (PsA)¹.

Objectives: To establish an epidemiological profile of patients with Pso and/or subclinical and clinical PsA; to establish the ultrasound (US) profile with gray scale and Doppler in entheses in these groups.

Methods: A case control study conducted in the period from December 2015 to December 2016, at Hospital das Clínicas/UFG. It was performed in 144 patients with Pso and/or PsA and 24 healthy controls. Patients with and without arthritis/enthesitis were submitted to the US. The US findings were according to the MASEI (the Madrid sonography enthesitis index). The entheses were studied bilaterally: plantar fascia, distal calcaneal tendon, distal and proximal ligament of the patella, distal quadriceps and tendons of the brachial triceps. In addition to the US in the 2nd and 3rd distal interphalanges. The interobserver reliability was calculated in 24 patients - kappa index (κ).

Results: In the case group the mean age was 50.13 years, BMI of 28.14; duration of illness of 16 years; **Mean±SD PASI: 5.34±6.03; PEST:2.21±1.66 and DLQI:4.39±5.16.** Of the total 90.3% of the patients presented Pso; 39.8% APs already diagnosed and 77.8% with signs of US enthesopathy. Of the total of the 1728 entheses evaluated in the case group and the control group of 288 structures evaluated. The most common sign in both groups was the thickening, being more seen in the calcaneus tendon (table). The MASEI score was significantly higher in patients with Pso and PsA than in the control group and had correlation with **PEST: r= 0,397, p<0,001 and IMC: r=0,208, p= 0,012.** Of the 288 nail insertion of the 2nd and 3rd distal interphalangeal, presented some type of enthesopathy to the US, like thickening (34,7%, p=0,036 to 0,003) or loss of the trilaminar pattern (31,6%, p= 0,027 to 0,004) and the most common change was positive PD (61,1%, p<0,001). Of the total nails evaluated only 17.5% had clinic injury. And the κ values weighted for the US findings showed excellent agreement (0.930 and 1) for PD and erosions, respectively. The epidemiological profile of patients with Pso and/or subclinical and clinical PsA were overweight. As for the US profile, the majority presented signs of enthesopathy, where the most frequent occurrence was the calcaneal tendon, and the Doppler was the most affected topography of the triceps tendon.

Conclusion: The ultrasonography shows an important perspective in assessing entheses these patients.

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Table: MASEI score:

Ultrasound Findings	Case (n=144)	Control (n=24)	p
Number of entheses changed	1728	288	
Structure (n (%))	472 (27,3)	16 (5,6)	< 0,001
Thickening (n (%))	503 (29,1)	37 (12,8)	< 0,001
Bursitis (n (%))*	95 (16,5)	05 (1,73)	0,004
Erosion n (%))	48 (2,8)	02 (0,7)	0,035
Calcification (n (%))	373 (21,6)	34 (11,8)	< 0,001
PD(n (%))	124 (7,2)	08 (2,8)	0,005

Test: Chi-Square; (PD: power Doppler).

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AB1162 ARE SONOGRAPHIC FINDINGS CORRELATED WITH DISEASE ACTIVITY SCORE IN RHEUMATOID ARTHRITIS REMITTED PATIENTS?

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Background: Obtaining remission is the ultimate and now attainable goal of treatment in rheumatoid arthritis (RA). However, the definition of remission kept changing over the last decade. Several composite scores and indices are now validated to assess remitting RA such as the Disease Activity Index 28 joints (DAS28), and more recently, the Simplified Disease Index (SDAI) and the Clinical Disease Index (CDAI). Despite more stringent definition criteria, progressive radiographic damages still occur in RA patients who reached remission. Defining other criteria for remission including ultrasound (US) might help preventing such evolution.

Objectives: The aim of this study was to compare US findings and composite score results in RA patients that achieved a status of remission according to DAS28.

Methods: Thirty Tunisian patients followed up for RA with DAS28 ≤2,6 for at least three months were enrolled. Among them, we identified patients in remission according to the SDAI (≤3,3) and the CDAI (≤2,8). US (Esaote MyLab 60 machine and a 13-18 MHz linear array transducer) was performed by an experienced rheumatologist blinded to clinical and laboratory data. For each patient, 22 joints were scanned (wrists, metacarpophalangeal, and proximal interphalangeal joints) using a semi-quantitative score.

Results: Over the 26 patients in CDAI remission, ultrasonographic synovitis in B-mode were noted in 81% of patients. The average ultrasound score per patient was 4.58. In PD mode, US abnormalities were noted in 58% of patients. The average PD score per patient was 2.6. Neither correlation between CDAI and B-mode US score (r = 0.104; p = 0.319) nor between CDAI and DP US score (r = 0.251; p = 0.217) was noted.

	US findings	Grade 0	Grade 1	Grade 2	Grade 3
Patients in CDAI remission	Synovial hypertrophy	491	48	28	5
	PD positive	535	14	15	8
Patients in SDAI remission	Synovial hypertrophy	365	34	16	3
	PD positive	396	6	9	7

B-mode examination of the 19 patients in SDAI remission detected synovitis in 79% of patients. The average ultrasound score per patient was 3.95. PD signal was positive in 53% of patients. The average PD-US score per patient was 2.3. Likewise, no correlation with SDAI was found neither with B-mode US score (r = 0.99; p = 0.687) nor with DP US score (r=0,036; p=0,884).

Conclusion: Thanks to the therapeutic armory we dispose of and the treat-to-target approach, remission is now a reachable goal. However, defining this goal is no easy task. Including US parameters in definition criteria of remission might help to detect subclinical evolving RA and adjust treatment in such cases.