All pts divided into groups based increase in erosions according to radiography (Rg +) and without it (Rg-). In the group Rg + GS at baseline was significantly higher than in Rg- group (6 [5; 10] and 5 [1; 8], respectively, p=0.04). CRP at 3 months and at 6 months was significantly higher in RG+ group than in RG- group (4,15 [1,2; 8,7] and 1,2 [0; 3,5], respectively, p=0.03 and 2,35 [0,8; 10,1] and 0,4 [0; 4,3], respectively, p=0.025).

Conclusion: Thus, we obtained the first data on the important prognostic role of ultrasound in assessing the progression of early RA in a prospective seven-year follow-up.

Disclosure of Interests: None declared

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AB1380 ULTRASONOGRAPHIC CHANGES OF PLANTAR FASCIA IN PATIENTS WITH PLANTAR FASCIITIS DUE TO ACQUIRED FLAT FOOT

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Background: Plantar fasciitis is a chronic degenerative process of the plantar fascia enthesis. It manifests by pain, predisposition to prolonged course and treatment resistance. In many cases, plantar fasciitis develops in patients with acquired flat feet. Taken into consideration above mentioned, the study of the plantar fascia changes in patients with acquired flat feet by sonography is relevant.

Objectives: To investigate the quantitative and qualitative sonographic changes of the plantar fascia in the case of plantar fasciitis in patients with acquired flat foot.

Methods: 190 patients with plantar fasciitis on the basis of acquired flat feet (133 females and 57 males). The average age of patients was 48 ± 0.97 years (18-81years). Unilateral pathology was noted in 117 patients and bilateral – in 73 patients. The average body mass index was 27.68±0.3. The average duration of pain syndrome was 101 ± 6.0 days (7-390 days). The pain syndrome lasted up from 1 to 6 months – in 152 patients, and more than 6 months – in 38 patients. The control group included 15 healthy volunteers (30 feet). Clinical radiological, sonographic, and statistical methods were used.

Results: The main sonographic features were significant reduction in echogenicity, erased or missing fibrous pattern, fuzzy contour of the aponeurosis; and modified contour of the calcaneus; small focal hyperechogenicity points in enthesis were detected. Loci of vascularization were detected using power Doppler sonography. The average thickness of plantar fascia in the study group was 6,14±1,5 mm (2,3-7,7 mm) and in control group – 3,5±0,1 mm (2,5-4,4 mm).

Conclusion: Sonographic signs of plantar fasciitis on the basis of acquired flat feet were changes in echogenicity and structure, changes in the contours of the cortical layer of enthesis and plantar fascia, the thickening of the enthesis of the plantar fascia of more than 4 mm.

Disclosure of Interests: None declared

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AB1381 DETECTION OF QUANTITATIVE ULTRASOUND CHANGES AFTER CORTICOID INFILTRATION OF THE PREACHILLEAL BURSA IN PATIENTS WITH INFLAMMATORY OR MECHANICAL ENTHESOPATHIES

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Background: It has recently been demonstrated that computer analysis of static ultrasound images can detect exercise-induced stromal changes in the body's load-bearing tendons.

Objectives: The purpose of this study is to determine if the same analysis can detect enthesic changes in patients who have undergone corticosteroid infiltration in the preachilles bursa.

Methods: Serial images of patients who received corticosteroid injections (around 40mg of triamcinolone acetonide) in the preachilles bursa were selected. For the records to be considered it was necessary at least one baseline ultrasound study, one between the first and second month after the injection and one between the third and sixth month after the injection. All images were obtained with the same ultrasound equipment, by the same operator and with the same gain and frequency settings.

The images were analyzed using the ImageJ 1.53e program, which allowed the recording of the mean intensity of gray (MIG), dispersion of gray intensities (DIG) and mode of gray intensities (MoIG).

Results: Eighteen image collections from the same number of patients were selected. Eight corresponded to mechanical enthesopathies (without any diagnosis of spondyloarthritis) and ten were patients with a diagnosis of axial spondyloarthritis (5) or psoriatic arthritis (5). The ratios of MIG, DIG and MoIG of the injured enthesis with respect to its control were, respectively, 1.12 SD 0.14, 0.88 SD 0.42 and 2.04 SD 1.54 for the mechanical pathology group and 0.89 SD 0.05, 1 SD 0.04 and 0.96 SD 0.03 for the inflammatory pathology group. Statistically significant differences in the MIG ratio were detected between patients with inflammatory diseases and patients with mechanical injuries (t=4.69, P=.000). Among patients with inflammatory pathology, the change between baseline and 3-6 months after infiltration MIG was statistically significant (82.59 SD 37.68 vs 92.02 SD 38.67; t=-5.69, P=.000). The changes between DIG and MoIG were not significant (t=0.899, P=.392 and t=-1.542, P=.158, respectively). Among patients with mechanical pathology, there were no significant differences between final and baseline MIG, DIG, or MoIG (t=1.921, P=.096; t=-1.533, P=0.169; and t=1.761, P=0.122, respectively). Figure 1 summarizes the changes in the mean gray intensity index (iMIG) in patients with mechanical and inflammatory pathology. In patients with inflammatory diseases, the changes between the final and basal iMIG tend to normalize (approaching the unit). In the mechanical pathology group, the iMIG variation shows a less defined behavior.

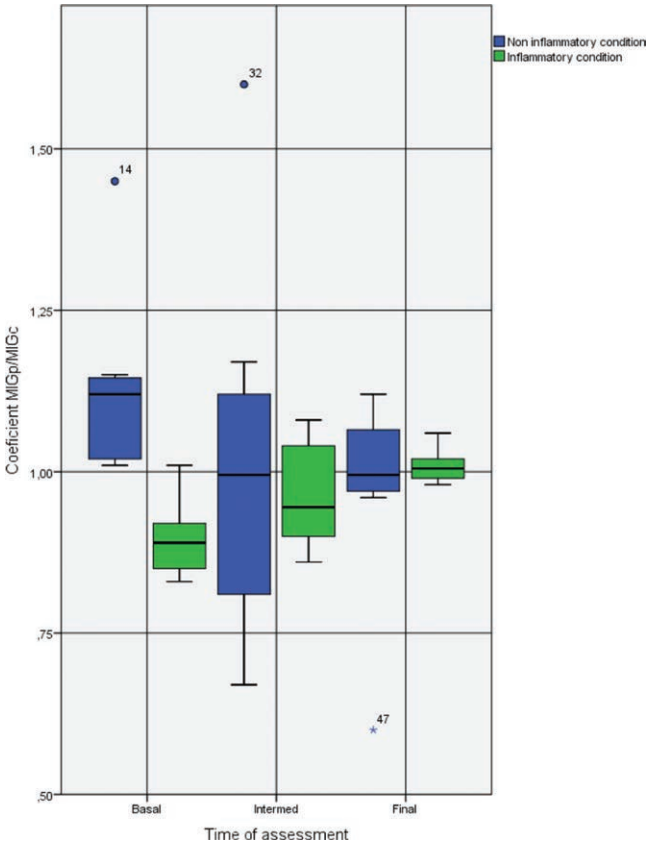

Figure 1. *Box and whisker plot showing the evolution over time of the pathological/healthy gray intensity mean coefficient. MIGp: Mean gray intensity in the pathological enthesis. MIGc: Mean gray intensity in the control enthesis of the same patient.*

Conclusion: The computer analysis of static images in gray scale can detect the changes observed in the Achilles enthesis of patients with inflammatory diseases such as spondyloarthritis. It is also demonstrated that in these patients the gray intensity change rate tends to be normalized (approaching the unit) after a steroid injection. Trend to normalization has not been evidenced in patients with mechanical pathology. Corticosteroids apparently do not act on the origin of the mechanical enthesopathies. Therefore, the study of the average, dispersion and fashion of gray intensities is erratic.