Background: Enthesis anatomy and biomechanics have a key role in Spondyloarthritis (SpA) pathogenesis (1) but few data are available about the influence of structural and biomechanical changes of Achilles tendon (AT) on persisting pain in longstanding SpA patients.

Objectives: To correlate AT pain in longstanding SpA patients with ultrasonographic detectable disorders and biomechanical abnormalities.

Methods: We performed a monocentric cross-sectional analysis including 35 consecutive patients affected by SpA (13 with Psoriatic Arthritis, 9 with Enteropathic SpA, 6 with Ankylosing Spondylitis and 7 with Undifferentiated SpA) under treatment with anti-TNF agents. A rheumatologic clinical and clinimetric evaluation (AT VAS pain, BASDAI, BASFI, HAQ), an ultrasound study of AT according to the Madrid Sonographic Enthesis Index (MASEI) score and a podiatrist biomechanical evaluation [Foot posture index (FPI), degree of ankle dorsiflexion with the knee extended and flexed] were performed.

Results: Study population (13 F; 22M; mean age 54.9 ± 13.9 years; mean disease duration 9.5 ± 5.0 years; mean BMI 25.8 ± 4.4) showed a mean AT VAS pain of 3.4 ± 2.2 , a mean HAQ of 0.6 ± 0.6 , a mean BASDAI of 3.3 ± 2.1 and a mean BASFI of 2.2 ± 1.9 . At the ultrasonographic evaluation 47% (33/70) of the AT entheses analysed presented a dishomogeneous echostucture, 31% (22/70) structural thickness, 53% (37/70) calcifications, 10% (7/70) erosions, 44% (31/70) a retrocalcaneal bursitis. A power Doppler positivity was found only in 0.07% (5/70) of the AT.

At the biomechanical evaluation 50% (35/70) of the feet showed a FPI score between 0 and +5 (neutral foot), 46% (32/70) a FPI score between +6 and +9 (slight foot pronation) and 6% (4/70) a FPI score between -1 and -4 (slight foot supination).

The mean degree of ankle dorsiflexion with extended knee was 8.4 ± 3.9 with the 61% (43/70) of the patients with a maximum dorsiflexion $< 10^\circ$ of whom 46% (20/43) do not recover after the knee flexion.

We found a between the mean degree of left ankle dorsiflexion with extended/flexed knee both with ultrasound-revealed left AT entheses calcifications ($p=0.014/0.037$) and with left AT entheses thickness ($p=0.049/0.035$), and a significant association between the mean degree of right ankle dorsiflexion and extended/flexed knee and ultrasound-revealed right AT calcifications ($p=0.008/0.012$). Moreover, we noticed an inverse correlation between the mean overall degree of ankle dorsiflexion with extended/flexed knee and the BASFI values ($p=0.007/0.004$). AT VAS pain was statistically related with Achilles PDUS signal persistence ($p=0.048$) but not with US signs of chronic enthesopathy or biomechanical alterations [calcification ($p=0.39$), erosions ($p=0.74$)]. The limits of the study were the low number of patients recruited and the lack of a control group.

Conclusion: In this monocentric study on a cohort of SpA patients, we demonstrated a statistically significant correlation between ankle-subtalar joint complex biomechanics alterations, ultrasonographic signs of chronic enthesopathy and clinimetric index of functional disability. Residual Achilles pain seems to be related to US signs of active enthesitis.

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AB0668

CLINICAL CHARACTERISTICS OF RADIOGRAPHIC AND NON RADIOGRAPHIC AXIAL SPONDYLOARTHRITIS IN A GROUP OF TUNISIAN SPONDYLOARTHRITIS

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Background: In the literature, non radiographic axial Spondyloarthritis (nr-SpA) is predominantly female with a shorter period of evolution and similar peripheral manifestations to radiographic axial spondyloarthritis (r-SpA). However, we do not have Tunisian studies comparing the two groups of axial spondyloarthritis (ax-SpA).

Objectives: The aim of this study was to assess the epidemiological and clinical differences between nr-SpA and r-SpA in a group of Tunisian ax-SpA.

Methods: Two hundred patients with ax-SpA (ASAS 2009 criteria) were retrospectively included and classified as r-SpA characterized by the presence of radiographic sacroiliitis and nr-SpA defined by the presence sacroiliitis

only on MRI or HLA B27 antigen with other clinical features. The different demographic and clinical parameters were compared between the nr-SpA and r-SpA groups.

Results: One hundred thirty-eight men and 62 women were included with a sex ratio of 2.2. The mean age was 43.3 ± 11.2 years and the mean period of evolution was 10.7 ± 8.4 years. The patients were divided to r-SpA in 80% of cases ($n = 160$) and nr-SpA in 20% of cases ($n = 40$).

Women were more present in the nr-SpA group with 47.5% of women versus 26.8% of women in the r-SpA group ($p = 0.01$). The patients with nr-SpA were younger with a mean age of 39.4 ± 13.4 years versus 44.3 ± 10.4 years in patients with r-SpA ($p = 0.03$). The mean period of evolution was shorter in nr-SpA group (5.8 ± 4.9 years vs 11.9 ± 8.5 ; $p < 0.001$). The family history of SpA was more frequent in nr-SpA group (17.5% vs 4.3%, $p = 0.004$). Arthritis were more frequent in nr-SpA (42.5% vs 13.7%; $p < 0.0001$). Similarly, enthesitis were more frequent in nr-SpA group (45% vs 15.6%; $p < 0.0001$).

No statistically significant differences were found in the following parameters: age at onset of symptoms, diagnostic delay, HLA B-27 antigen and dactylitis.

Conclusion: The clinical features were different in the 2 groups of ax-SpA: Patients with nr-SpA were more female and had more peripheral manifestations while patients with r-SpA were older and with longer period of evolution.

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AB0669

PARTICULARITIES OF TUNISIAN FEMALE AXIAL SPONDYLOARTHRITIS

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Background: Axial spondyloarthritis (ax-SpA) is a chronic rheumatic disease that mainly affects men. However, the female form of ax-SpA remains insufficiently studied.

Objectives: The aim of this study was to determine the clinical characteristics, the disease activity and the functional impact of female ax-SpA in comparison with male ax-SpA.

Methods: This is a retrospective study including patients diagnosed with ax-SpA fulfilling the criteria of the Assessment of SpondyloArthritis international Society (ASAS) 2009.

Clinical parameters, erythrocyte sedimentation rate (ESR), C-reactive protein (CRP), Bath ankylosing spondylitis disease activity index (BASDAI) and Bath ankylosing spondylitis functional index (BASFI) were compared between groups of female and male ax-SpA.

Results: Two hundred ax-SpA patients were included with 31% of female ($n=62$) and a mean age of 43.3 ± 11.2 years.

The mean age at onset of symptoms was 31.8 ± 8.9 years for women and 25.3 ± 9.1 years for men ($p < 0.0001$). The mean age at diagnosis was 36.4 ± 9.6 years for women and 31.7 ± 10.4 years for men ($p = 0.003$). Ax-SpA with juvenile onset was noted in 1.7% of women and 12.1% of men ($p = 0.02$). Male ax-SpA were significantly more smokers (46.8% vs 5.4%; $p < 0.001$). The mean duration of morning stiffness was 11.3 ± 9.2 minutes for women versus 21.6 ± 19.3 minutes for men ($p = 0.005$).

The mean ESR was 42.4 ± 29.8 mm for women and 28.3 ± 23.4 mm for men ($p = 0.001$). Radiographic sacroiliitis was present in 69.3% of women versus 84.7% of men ($p = 0.01$). The use of anti-TNF alpha was less frequent in women (29% vs 48.5%; $p = 0.01$).

Our study didn't found a statistically significant difference in peripheral manifestations, extraarticular manifestations, CRP, BASDAI and BASFI between the two groups.

Conclusion: Female ax-SpA seems to have a better prognosis than male with older age in disease onset, less inflammation, less radiographic sacroiliitis and less use of biological treatments.

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