Methods: We conducted a cross-sectional study carried out in Rheumatology department of Military Hospital of Instruction of Tunis over a 10-year period (2010-2020) including SA patients meeting The Assessment of SpondyloArthritis international Society (ASAS). For each patient we collected the following informations: age, characteristics of hip involvement, ASDAS (Ankylosing Spondylitis Disease Activity Score), BASDAI (Bath Ankylosing Spondylitis Disease Activity Index), BASMI (Bath Ankylosing Spondylitis Metrology Index) and BASRI (Bath Ankylosing Spondylitis Radiology Index). We also measured Erythrocyte Sedimentation rate (ESR) and C-reactive protein (CRP).

Results: One hundred forty-one patients were included. They were 103 men and 38 women. The mean age was 43.01 ± 12.9 years. The mean age at the onset was 34.28 ± 12.05 years. The mean delay of the disease was 9.16 ± 8.98 years. The mean BASDAI and IASDAS-CRP were 3.89 ± 2.29 and 3.07 ± 1.83 , respectively.

Hip involvement was noted in 35.5% of the cases ($n=50$). It was bilateral in 41 of the cases. The number of affected hips was thus 91. The mean delay between the onset of SA and the discovery of hip involvement was 32.24 ± 53.58 months [0-264 months].

A significant difference was noted in the axial mobility between patients who have hip involvement and those who don't (BASMI was 3.8 ± 2.45 versus 1.45 ± 1.8 , $p < 0.0001$).

Moreover, functional impact was higher in patients with hip involvement (BASFI was 5.7 ± 2.24 versus 3.45 ± 2.86 , $p < 0.0001$).

Patients with hip involvement had significantly higher BASRI compared to patients with no hip involvement (5.79 ± 3.17 versus 3.14 ± 2.42 , $p < 0.0001$).

However, no difference was found between patients who have hip involvement and those who don't with these following parameters: ESR, CRP, BASDAI and ASDAS-CRP.

Conclusion: Our study showed that hip involvement is quite common in military SA patients. It is responsible of an important functional impact and it seems to be associated to a major limitation of axial mobility. Nevertheless, hip involvement was not associated neither to inflammation parameters levels nor to the disease activity, this suggest that hip involvement may progress independently of the disease activity in military patients due to physical stress and micro traumas.

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AB0510

THE ROLE OF BONE SCINTIGRAPHY FOR THE FOLLOW-UP EVALUATION OF INFLAMMATORY ACTIVITY IN PATIENTS WITH SERONEGATIVE SPONDYLOARTHRITIS

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Background: The use of bone scintigraphy (Sc) in spondyloarthritis (SpA) as a technique for diagnosis, assessment of activity and treatment decision has been questioned by the scientific community. Due to its low cost compared to Magnetic Resonance Imaging - MRI (the gold standard)¹, some studies proposed to evaluate Sc's diagnostic accuracy. These studies have shown that Sc has a

low diagnostic sensitivity of 50-55%². Also, there is a poor correlation between symptoms and scintigraphic uptake³. We aimed to evaluate the use of Sc for management and follow-up of patients with SpA.

Objectives: To determine if Sc activity correlates with patients' complaints (peripheral and axial), inflammatory markers, disease activity scores and whether it influenced physicians' treatment decisions during the follow-up of the disease.

Methods: We performed a retrospective review of all patients at our department with SpA with at least one Sc from 2018 to 2020. The following variables were analyzed: demographic data, spondyloarthropathy subtype (ankylosing, enteropathic, psoriatic and undifferentiated SpA), axial or peripheral pain, Sc findings (inflammatory vs no-inflammatory activity), inflammatory markers (sedimentation rate - ESR and C-Reactive Protein - CRP), disease activity scores within one year since the Sc (Ankylosing Spondylitis Disease Activity Score with Erythrocyte Sedimentation Rate - ASDAS-ESR and Bath Ankylosing Spondylitis Disease Activity Index - BASDAI) and treatment at the time of the Sc (non-steroidal anti-inflammatory drugs, conventional synthetic disease-modifying antirheumatic drugs (DMARDs), target synthetic DMARDs and biologic DMARD. Treatment decisions (escalation, de-escalation or maintenance) in accordance to Sc results were also reviewed.

We used the non-parametric Mann-Whitney's U test for comparisons between ordinal or numerical variables. For correlations between categorical variables we used the Fisher's exact test and the χ^2 -independence test. Tests with $p < 0.05$ were statistically significant.

Results: Fifty-five patients were reviewed, 75% women; median age of 48 years. Seventy-one percent had ankylosing SpA, 15% enteropathic SpA, 5% psoriatic SpA, 5% undifferentiated and 4% reactive SpA. Sixty-two percent of the patients had both axial and peripheral pain and 24% only axial complaints. Sixty-two percent of the patients had a Sc with no inflammatory changes, 27% had peripheral and 25% had axial inflammatory changes; 15% had evidence of both peripheral and axial inflammation. For ankylosing SpA, the median ASDAS-ESR was 2.89 and according to the BASDAI, 66% had active disease. The median CRP and ESR in patients with inflammatory vs a normal Sc was not different ($p=0.02$ vs $p=0.36$, respectively). Similarly, Sc findings were not correlated with patients' axial ($p=0.10$) or peripheral pain ($p=1.0$), neither with the ASDAS-ESR ($p=0.29$) or the BASDAI ($p=0.29$). There was no correlation between inflammatory activity in Sc and the decision to maintain, escalate or de-escalate treatment ($p=0.65$), including the decision to start a biological DMARD ($p=1.0$) or to switch between biological DMARDs ($p=0.19$).

Conclusion: There was no correlation between Sc findings and ESR, patients' complaints, disease activity or treatment decisions. Considering previous research showing a low diagnostic sensitivity, our findings seem to support a limited role of bone Sc for the follow-up and management of patients with seronegative SpA.

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