SAT0407 RISE IN THE DIAGNOSIS OF NON-RADIOGRAPHIC FORM OF AXIAL SPONDYLOARTHRITIS IN NORTHERN ISRAEL OVER TIME

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Background: Approach to the diagnosis of axial spondyloarthritis (axSpA) has changed in the last decade, with the aim of diagnosing the disease in its early form.

Objectives: The objective of this study was to explore change in the diagnostic pattern of axSpA in Northern Israel over the last 15 years.

Methods: Patients with the clinical diagnosis of axSpA from six rheumatology practices affiliated with the Rheumatology Unit of the Bnai Zion Medical Center in Haifa, Israel were recruited to the study. Ankylosing Spondylitis (AS) was diagnosed in the presence of sacroiliitis grade 2 or more on X-ray films; all other patients were considered as having non-radiographic axSpA. All patients were subdivided by time periods to 5 groups, and percentages of patients diagnosed in the non-radiographic stage of the disease, as well as patient demographic data were compared using exact Fisher test.

Results: One hundred twenty five patients were subdivided to 5 groups by periods of diagnoses (before 2000, 2001–2004, 2005–2008, 2009–2012, 2013–2016). Gradual increase in a proportion of patients diagnosed with non-radiographic axSpA was observed over years, with statistical significance achieved in 2013–2016 ($p < 0.05$) (Fig.1). Patients' gender and age distribution did not differ significantly among the groups.

Conclusions: Progressive increase in the proportion of patients diagnosed with non-radiographic form of axSpA over years was observed in this study. This finding, made on the basis of real life data, reflects change in the diagnostic approach to spondyloarthritis during the last decades.

Disclosure of Interest: None declared

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SAT0408 POSITIVE CORRELATION BETWEEN INFLAMMATION ON SACROILIAC JOINT MRI AND SERUM C-TERMINAL TELOPEPTIDE OF TYPE-I COLLAGEN IN ANKYLOSING SPONDYLITIS BUT NOT IN NON-RADIOGRAPHIC AXIAL SPONDYLOARTHRITIS

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Background: The MRI-determined inflammatory score was suggested as a more objective measure of disease activity than clinical activity scores in axial spondyloarthritis. It would be useful to identify the disease activity scores and/or laboratory biomarkers that objectively reflect inflammation on MRI.

Objectives: To identify the clinical disease activity scores and laboratory markers that best reflect magnetic resonance imaging (MRI)-determined sacroiliac joint (SIJ) inflammation in ankylosing spondylitis (AS) and non-radiographic axial spondyloarthritis (nr-axSpA).

Methods: This cross-sectional study included all consecutive patients who presented with axial spondyloarthritis in 2013–2015. All underwent SIJ MRI. The bone marrow edema in the inflammatory lesions on MRI was scored using the SPondyloArthritis Research Consortium of Canada (SPARCC) method. Bone-specific alkaline phosphatase (BALP), serum C-terminal telopeptide of type-I collagen (sCTX-I), and inflammatory markers were measured. Bath Ankylosing Spondylitis Disease Activity Index (BASDAI) and Ankylosing Spondylitis Disease Activity Score (ASDAS) were assessed. The correlations between the MRI-determined SIJ inflammation scores and disease activity scores and laboratory variables were evaluated.

Results: Of the 81 patients with axSpA, 45 had AS and 36 had nr-axSpA. The AS and nr-axSpA groups did not differ in terms of disease activity scores, physical functional index, or MRI-determined SIJ inflammation. Erythrocyte sedimentation rate, C-reactive protein, and ASDAS correlated with MRI inflammatory scores in

nr-axSpA but not in AS. sCTX-I correlated with MRI-determined SIJ inflammatory scores in AS only. BASDAI and BALP levels did not associate with MRI inflammatory scores in either group. Multivariate analysis showed that sCTX-I associated independently with MRI inflammatory score in AS ($\beta = 17.047$, $p = 0.038$).

Conclusions: Inflammatory markers and ASDAS correlated with active sacroiliitis on MRI in nr-axSpA only. In AS, only sCTX-I correlated with active inflammation on SIJ MRI. sCTX-I may be useful as a marker of objective inflammation in AS.

Disclosure of Interest: None declared

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SAT0409 IMPORTANCE OF ULTRASONOGRAPHY FOR THE DETECTION OF PERIPHERAL ENTHESTITIS IN SPONDYLOARTHRITIS

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Background: Peripheral enthesitis has been repeatedly described like the primary lesion in all forms of spondyloarthritis (SpA), and it may occur at any entheses in SpA, though it is most common in the entheses of the lower limbs. Ultrasonography (US) has proved to be a highly sensitive and noninvasive tool, to assess the presence of enthesitis

Objectives: To estimate the prevalence and the US abnormalities of enthesitis in patients with SpA, compared to a control group.

Methods: We have consecutively included 40 patients with established SpA, including 30 patients with ankylosing spondylitis (AS), 8 patients with psoriatic arthritis (RP) and two patients with arthritis-associated with Crohn's disease. Control populations consisted of 20 patients with mechanical low back pain (MBP). Ultrasound (US) in B mode and power Doppler (PD) was performed at Achilles tendon (AT) and plantar fascia (PF).

Results: The study sample included 40 control patients (4 male- 16 female) with a mean (SD) age of 51.05 (11.45) years (range 32–73) and mean duration of disease 8.40 (range 5–81) years.

SpA subtypes were: ankylosing spondylitis 30; psoriatic arthritis 8; arthritis-associated inflammatory bowel disease (AIBD) 2. 47.5% of entheses were tender at clinical examination. Axial form was found in 36 cases (90%) and peripheral form in 4 cases (10%).

In SpA patients, a total of 109/160 (68.12%) of the enthesal sites were abnormal compared with 27/80 (33.75%) in controls, which was statistically significantly fewer than in the SpA group for AT ($p = 0.000$) and PF ($p = 0.023$). Abnormal vascularization in the cortical bone insertion was found in 47 cases (29.375%) versus 4 cases in control group with a significant correlation. We also found a significant correlation for decreased echogenicity and bone erosions. No major variation in the proportion of abnormal entheses identified by US examination was observed between different forms of SpA.

US abnormalities were not correlated to the duration of the disease in patients with SpA, and there was no significant difference between US findings and either ESR, CRP, BASDAI score or BASFI score. We also found no significant correlation between enthesal US abnormalities and the anti-TNF medications used among the SpA patients.

Conclusions: Ultrasonography can be useful for detecting subclinical enthesitis in SpA patient and the entheses US score can be useful for improving the diagnostic of SpA.

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SAT0410 HLA-B27 ROLE IN ANKYLOSING SPONDYLITIS PHENOTYPE: RESULTS FROM THE REGISPONER DATABASE

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Objectives: To assess if there are different phenotypical patterns of Ankylosing Spondylitis (AS) patients depending on the positivity or negativity of HLAB27.

Methods: This is a multicentric, observational, transversal and descriptive study of AS patients from the Spanish database REGISPONER. We compared HLAB27 positive and HLAB27 negative patients regarding clinical and demographical data, disease activity and structural damage. In order to assess disease activity we used the Bath Ankylosing Spondylitis Disease Activity Index (BASDAI) and acute phase reactants (VSG and PCR). Functional disability was measured by Bath Ankylosing Spondylitis Functional Index (BASFI), and structural damage by Bath Ankylosing Spondylitis Radiology Score (BASRI). For qualitative variables we used the Chi square test and for quantitative ones the t test. An univariate

and multivariate comparative analysis was performed, in order to define which variables were related to the negativity or positivity of HLAB27.

Results: Data of 1235 AS patients were analysed. Of them 1029 (83.3%) were HLAB27 positive and 206 (17.7%) HLAB27 negative. 924 (74.8%) were men. AS patients with HLAB27+ presented significantly more familiar history of spondyloarthritis (p=0.002), were younger (p=0.012) and had earlier disease onset and disease diagnosis (p<0.001), with a longer disease duration (p=0.037) and a trend to a higher percentage of uveitis compared to those with HLAB27-. On the other hand, AS patients with HLAB27- also presented significantly more peripheral arthritis (p=0.0022), dactylitis (p=0.001) and extraarticular manifestations (psoriasis, palmoplantar pustulosis, inflammatory bowel disease (IBD) and balanitis (p<0.001)) compared with those of HLAB27+. AS patients with HLAB27- also presented higher scores of BASDAI and BASFI (p=0.047 and p=0.005 respectively). The study didn't show differences between both groups of patients regarding sex distribution, axial manifestations, enthesitis nor radiological damage (assessed by BASRI). In the multivariate analysis, the family history of spondyloarthritis (OR 2.10, IC95% 1.27–3.49, p=0.004), the age at diagnosis (OR 0.97, IC95% 0.96–0.98, p<0.001), the presence of dactylitis (OR 0.16, IC95% 0.05–0.56, p=0.004), extraarticular manifestation specially IBD (OR 0.22, IC95% 0.12–0.40, p<0.001) and peripheral arthritis (OR 0.53, IC95% 0.32–0.89, p=0.016) were the variables independently associated with the presence of HLAB27.

Conclusions: The presence of HLAB27 in AS patients is associated to an earlier disease onset, a higher frequency of familiar history of spondyloarthritis, and a lower frequency of dactylitis, extraarticular manifestations and peripheral arthritis.

Disclosure of Interest: None declared

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SAT0411 CORRELATION BETWEEN DISEASE ACTIVITY SCORES AND QUALITY OF LIFE IN SPONDYLOARTHRITIS

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Background: Spondyloarthritis (SpA) is a group of chronic inflammatory rheumatism and it is known to be one of the leading causes of disability.

Objectives: This study aimed to investigate the quality of life and the psychological disorders (depression, anxiety and insomnia) in patients with SpA.

Methods: A total of 60 patients were included with the diagnosis of SpA meeting the Amor and New York modified criteria, in a prospective study. In a questionnaire, the characteristics of the disease and sociodemographic patient were collected. Also psychiatric assessment was done using the insomnia severity index score (ISI) and the Hospital Anxiety and Depression scale (HAD). In addition, patients answered to the Ankylosing Spondylitis Quality of Life (ASQoL) questionnaire and the SF-12.

Results: The sex-ratio (men/women) was 3.28 (46/14), the average age was 37.95 years (18–70). The average duration of disease progression was 11.5 years (1–30). The mean value of the Bath Ankylosing Spondylitis Disease Activity Index (BASDAI) was 5.11 and the Bath Ankylosing Spondylitis Functional Index (BASFI) was 5.22. Uveitis was reported in 11.7% of patients, osteoporosis in 35%, enthesitis in 36.7% and coxitis in 36.7%. 78.3% of patients received NSAID and 30% were treated with bioterapy. On the psychological level, 25% of patients had an anxiety, 20% had depression. According to the ISI, 35% of patients had sub threshold insomnia, 20% had moderate insomnia and 10% had severe insomnia. The mean value of the ASQoL was 9 (0–16). The mean value of the physical health was 37.13 (19.34–60.41) and for the mental health was 41.65 (14.9–60.35). A significant positive correlation was found between the disease activity and the ASQoL (p=0.000), the physical health (p=0.000) and the mental health (p=0.002). Also, we found a significant positive correlation between the BASDAI and depression (p=0.01) and insomnia (p=0.001).

Conclusions: SpA is a chronic inflammatory disease that contributes to significant physical disability and decreased quality of life in a significant number of patients. The treatment of those patients must consider the improvement of quality of life, as part of a global approach.

Disclosure of Interest: None declared

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SAT0412 ASSOCIATION BETWEEN SMOKING WITH SPINAL LEVEL OF STIFFNESS AND FUNCTIONAL LIMITATION IN PATIENTS WITH AXIAL SPONDYLOARTHRITIS: RESULTS FROM THE SPANISH ATLAS

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Background: Smoking has been associated with greater disease activity and radiographic progression in patients with Axial Spondyloarthritis (ax-SpA). In addition, radiographic damage has been linked to greater functional limitation. However, clarification is still being sought as to whether or not this association exists.

Objectives: To investigate the association between smoking and both the area of spinal stiffness and functional limitation in patients with ax-SpA.

Methods: A sample of 680 patients diagnosed with ax-SpA was interviewed during 2016 as part of the Spanish Atlas, which aims to promote early referral and improve healthcare and the use of effective treatments in patients with ax-SpA. Tobacco consumption was recorded as: Smoker (62.4%), Occasional Smoker (8.9%) and Non-Smoker (28.7%). Spinal stiffness was assessed in the three different vertebral areas: cervical, dorsal and lumbar.

To determine the degree of functional limitation we used a composed index which includes the sum of the degree of limitation in the 18 daily activities well established (dressing, grooming, bathing, tying shoelaces, moving around the home, stairs, getting to/out of bed, toilet, shopping, preparing meals, eating, cleaning, walking, using public transportation, going to the doctor, driving, physical exercise, sexual relations) using an ordinal variable (0=none, 1=little, 2=some and 3=moderate). A descriptive analysis was used to compare the level of stiffness (chi-squared test) and the mean degree of limitation (Kruskal-Wallis test) in the different groups of smokers consumptions. Regression analysis was also used to assess the relation between smoking and degree of limitation (0–54).

Results: 53% were females, mean age 46 years and 77.1% were HLA-B27+. The percentage of patients with stiffness in the lumbar region was significantly higher in habitual/occasional smokers than in non-smokers (89.0%, 93.8%, 83.5% respectively; p<0.01) (Table). The mean degree of functional limitation increased with tobacco consumption, although this difference was not statistically significant (47.9±12.1 vs. 45.1±11.5 vs. 44.8±13.7 respectively; p=0.2). However, regression analysis showed a statistically significant correlation between smoking and functional limitation (r=0.096; p=0.02).

Relationship between tobacco consumption and spinal stiffness levels in patients with ax-SpA

	Smoker	Occasional smoker	Non smoker	P	χ ²
Cervical stiffness	84.2%	77.1%	73.1%	0.171	9.044
Dorsal stiffness	76.0%	76.6%	72.4%	0.408	6.141
Lumbar stiffness	89.0%	93.8%	83.5%	0.002	20.518

Source: Spanish Atlas.

Conclusions: Smoking in patients with ax SpA is associated to greater stiffness in the lumbar region, but is not related to stiffness in the cervical or dorsal regions. Additionally, smoking is associated to the degree of functional limitation in these patients.

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SAT0413 INFECTIOUS PROFILE IN A TUBERCULOSIS-ENDEMIC POPULATION WITH SPONDYLOARTHRITIS

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Background: Screening latent tuberculosis (TB) and other opportunistic infections in patients with spondyloarthropathies (SpA) with biologic or immunosuppression therapy is important in highly endemic population (1).

Objectives: To assess the prevalence of latent and active TB, hepatitis B, hepatitis C, HIV and Syphilis in a colombian cohort with SpA, as well as evaluate differences between treatments.

Methods: A cross-sectional study was conducted in 621 patients with SpAs, in whom TB, hepatitis B, hepatitis C, HIV and syphilis screening was analyzed based on type of diagnosis. Differences among immunomodulatory therapies were assessed. Statistical association was examined by means of Chi-square tests, Mann-Whitney test, and logistic regression analyses.

Results: The prevalence of latent and active TB in this cohort were 63.1%, and 2.9%, respectively. Significant differences were found in proportions of latent and active TB among types of SpAs, indicating a positive association with AS. A high

Table 1. Infectious profile in colombian patients with SpAs

	All N=621		AS N=340		PsA N=222		Und SpA N=59		p-value
	N	%	N	%	N	%	N	%	
Latent TB	251/398	63,1	156/244	63,9	76/126	60,3	19/28	67,9	0,009
Positive TST before immunotherapy	175/398	44	98/244	40,2	64/126	50,8	13/28	46,4	0,64
TST conversion during immunotherapy	76/398	19,1	59/244	24,2	13/126	10,3	4/28	14,3	<.0001
Active TB	18	2,9	12	3,5	4	1,8	2	3,4	0,03
Latent TB conversion to active TB	7	1,1	6	1,8	1	0,4	0	—	0,04
Active TB during immunotherapy	11	1,8	10	2,9	1	0,4	0	—	0,008
Hepatitis B	11/400	2,8	4/241	1,7	6/128	4,7	1/31	3,2	0,32
Hepatitis C	2/400	0,5	2/241	0,8	0/128	—	0/31	—	0,61
VDRL test	2/285	0,7	1/167	0,6	1/94	1,1	0/24	—	0,38
HIV	3/330	0,9	2/197	1	0/111	—	1/22	4,5	0,14

Ankylosing spondylitis (AS), psoriatic arthritis (PsA), undifferentiated spondyloarthritis (Und SpA), tuberculin skin test (TST).