patients (72.7%) and 60/103 mNY- patients (58.3%) had a positive MRI-SI (ASAS definition).

The table shows the mean scores for MRI-SI lesions. In erosions, fatty lesions and ankylosis, either partial or complete ankylosis, there was a statistically significant difference ($p < 0.05$) between mNY+ and mNY- patients.

Table: Average MRI-SI lesion scores in axSpA patients with a symptom onset of <30 years fulfilling and not fulfilling the modified New York criteria.

MRI lesions	mNY+ (n=11)	mNY- (n=103)	P-value
Inflammatory lesions (SPARCC score)*	8.9 (± 6.0)	7.3 (± 7.2)	0.341
Erosions*	7.6 (± 4.4)	3.5 (± 4.2)	0.003
Fatty lesions*	6.6 (± 8.3)	1.8 (± 4.6)	0.005
Sclerosis*	1.1 (± 2.0)	0.9 (± 2.6)	0.237
(Partial) Ankylosis*	7.6 (± 11.5)	0.8 (± 3.2)	0.030

*mean ($\pm$ SD)

Conclusion: Patients with newly diagnosed axSpA and a symptom onset before 30 years infrequently fulfill the mNY criteria. A statistically significant difference in the presence of MRI-SI structural lesions was reported between mNY+ and mNY- patients. AxSpA patients with an early symptom onset have more erosions, fatty lesions and ankylosis on MRI when fulfilling the mNY criteria.

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SAT0323 HEPATOCYTE GROWTH FACTOR IS A PREDICTOR OF DEVELOPMENT OF NEW SYNDESMOPHYTES IN MEN WITH ANKYLOSING SPONDYLITIS. A FIVE YEAR PROSPECTIVE STUDY

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Background: Patients with ankylosing spondylitis (AS) have an increased risk of spinal new bone formation characterized by the development of syndesmophytes. Knowledge of predictors for development of syndesmophytes is limited. Hepatocyte growth factor (HGF) has regulatory effects on a variety of cells in many different organs. HGF signaling can affect both osteoclast and osteoblast lineages and has been shown to promote osteogenesis. Cross-sectional association between increased HGF and increased modified Stoke Ankylosing Spine Score (mSASSS) has previously been shown [1], whereas knowledge of HGF as a predictor for new bone formation is lacking.

Objectives: To study serum HGF as a predictor for development of new syndesmophytes in patients with AS followed for five years.

Methods: Serum levels of HGF was analyzed using ELISA in patients with AS (modified NY-criteria) and in healthy controls (HC) at baseline. Spinal lateral radiographs were obtained at baseline and at the 5-year follow-up and assessed for development of new syndesmophytes using mSASSS. Univariate and multivariable logistic regression analyses were used to assess predictors for development of ≥ 1 new syndesmophyte.

Results: Serum HGF and radiographs at baseline and follow-up were available for 163 patients, 88 men and 75 women, baseline mean age 50 ± 12 years. AS patients had higher serum HGF than HC ($n=80$), $p=0.050$. In the AS group, 36 patients (22%) developed ≥ 1 syndesmophyte, 27 men and 9 women. In the total AS group, neither did baseline serum HGF differ between those who developed ≥ 1 new syndesmophyte and those who did not progress, nor did it predict development of ≥ 1 new syndesmophyte in the univariate analysis, $p=0.25$. Interestingly, men who developed ≥ 1 new syndesmophyte had higher serum HGF than the non-progressors (1706 ± 454 vs 1420 ± 338 pg/mL, $p=0.001$) and increased serum HGF at baseline predicted development of ≥ 1 syndesmophyte (OR per 1 SD HGF 2.39, 95% CI 1.31 to 4.36) in the univariate analysis. Serum HGF did not predict new syndesmophytes in women, $p=0.13$. Multivariable analysis for men including age, smoking, baseline syndesmophyte and serum HGF showed high HGF (OR per 1SD 1.90, 95% CI 1.01 to 3.59) and ≥ 1 baseline syndesmophyte (OR 3.48, 95% CI 1.09 to 11.07) to independently predict development of ≥ 1 new syndesmophyte. If baseline CRP was included in the multivariable model,

serum HGF and baseline syndesmophytes remained the significant predictors.

Conclusion: High baseline serum HGF was shown to independently predict the development of at least one new syndesmophyte over five years in men with AS.

REFERENCE

- [1] Torres L, Klingberg E, Nurkkala M, Carlsten H, Forsblad-d'Elia H. Hepatocyte growth factor is a potential biomarker for osteoproliferation and osteoporosis in ankylosing spondylitis. Osteoporos Int 2018.

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SAT0324 ARTICULAR MANIFESTATIONS IN PATIENTS WITH INFLAMMATORY BOWEL DISEASE TREATED WITH VEDOLIZUMAB

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Background: Vedolizumab (VDZ) is a humanized IgG1 monoclonal antibody anti- $\alpha 4\beta 7$ integrin agent used in inflammatory bowel disease (IBD). It has been incriminated in occurrence of articular manifestations but, as it is given in most cases after anti-TNF $\pm$ therapy, it is not known if these articular manifestations are linked to IBD-associated arthritis and unmasked by withdrawal of anti-TNF $\pm$ or are more directly linked to VDZ.

Objectives: The purpose of this study is to describe articular manifestations occurring in patients treated by vedolizumab, and to highlight risk factors for inflammatory manifestations.

Methods: In this retrospective monocentric study, we collected all the cases of incident articular manifestations occurring in the follow-up of the patients treated by VDZ for IBD.

Results: Between February 2013 and June 2017, 112 patients were treated with vedolizumab (56 women, age 39.9 ± 16 years, disease duration = 9.1 ± 7.8 years). IBD cases were distributed into 59 (52.7%) Ulcerative Colitis (UC), 49 (43.8%) Crohn's disease (CD), and 4 (3.6%) Undetermined Colitis. Four patients (3.6%) had a history of spondyloarthritis and 13 (11.6%) of peripheral arthralgia associated with IBD. 102 (91.1%) patients previously received anti-TNF α . At initiation of vedolizumab, 55 (49.1%) received an associated DMARD (azathioprine in 19.6%, purinethol in 11.6%, methotrexate in 7.1%).

After a mean follow up duration of 11.4 ± 8.6 months, 32 (28.6%) patients presented 35 types of articular manifestations, mechanical ($n = 18$) (mostly osteoarthritis and tendinitis) or inflammatory ($n = 17$). Inflammatory articular manifestations were: early reversible arthralgia mostly occurring during perfusion ($n = 5$), manifestations linked to IBD ($n = 11$), axial spondyloarthritis, $n = 3$, peripheral spondyloarthritis, $n = 3$,

peripheral and axial spondyloarthritis, $n = 1$, peripheral inflammatory arthralgia, $n = 4$) with parallel evolution to intestinal symptoms ($n = 8$) or with independent evolution ($n = 3$). One patient had chondrocalcinosis ($n = 1$) (cf figure).

Among the 11 patients with articular manifestations linked to IBD, 10 were previously treated with anti-TNF α . The only predictive factor for inflammatory manifestation was a history of previous inflammatory articular manifestation, present in 43.8% ($n = 7/16$) of patients with inflammatory articular manifestation versus in 12.5% ($n = 10/80$) of patients without articular manifestation, $p = 0.007$.

Vedolizumab was stopped in 7 patients (6.3%), due to articular symptoms ($n = 1$), to digestive symptoms ($n = 4$) or both ($n = 2$).

Conclusion: Articular manifestations occurred in almost 30% of patients treated with vedolizumab. Half of them were inflammatory (15%), including 5% of early reversible arthralgia during perfusion. We observed 11 manifestations linked to IBD, including 7 spondyloarthritis, potentially unmasked by withdrawal of anti-TNF α . Indeed, the only predictive factor of inflammatory arthritis was history of previous articular inflammatory manifestation. However, withdrawal of vedolizumab because of inflammatory arthritis was necessary in only 0.9% of all patients.

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SAT0325 REDUCED STRAIN AND INCREASED STIFFNESS OF COMMON CAROTID ARTERIES IN PATIENTS WITH ANKYLOSING SPONDYLITIS

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Background: Ankylosing spondylitis (AS) is associated with an increased risk of cardiovascular disease (CVD) which also contributes to the increased mortality observed in AS. It is therefore important to develop non-invasive, accurate methods for early detection of atherosclerotic vascular changes. Studies, in other populations, have demonstrated associations between arterial stiffness and atherosclerotic burden and incident cardiovascular events. The arterial stiffness can be examined by ultrasound providing the β stiffness index that evaluates mechanical deformation properties. Technological advancements in ultrasound have developed a method assessing strain, using speckle tracking technique, which measures deformation mechanics in more dimensions. The speckle tracking method assessing arterial wall motion might permit earlier detection of subclinical CVD.

Objectives: To study, for the first time, bilateral common carotid arterial (CCA) circumferential strain and β stiffness index in patients with AS and 1) compare the results with age and sex-matched controls and 2) explore relationships between circumferential strain and β stiffness index with

Table.. Multivariable linear regression analysis in 149 patients with AS

Mean CCA circumferential strain, %			Mean β stiffness index, mmHg/mm		
Covariates	β	p-value	Covariates	β	p-value
Age, years	-0.22	0.021	Age, years	0.29	0.008
Anterior uveitis, Y/N	-0.17	0.021	Peripheral arthritis, Y/N	0.077	0.35
cs and/or bDMARD, Y/N	-0.15	0.036	Hypertensive disease, Y/N	0.066	0.43
BASFI, score	0.033	0.69	BASMI, score	0.12	0.32
BASMI, score	-0.008	0.93	Syndesmophyte, Y/N	-0.039	0.69
ESR, mm/h	-0.30	<0.001	Pack years, smokers, n	0.16	0.059
Cholesterol, mmol/L	-0.021	0.79	Pulse pressure, mmHg	-0.002	0.98
HDL, mmol/L	-0.094	0.22	Heart rate, bpm	0.13	0.12
Systolic blood pressure, mmHg	-0.025	0.81			
Diastolic blood pressure, mmHg	-0.121	0.22			
Heart rate, bpm	-0.16	0.038			
Adjusted R ² 0.31			Adjusted R ² 0.22		

disease activity, physical function and traditional risk factors for CVD in patients with AS.

Methods: A cohort of 149 patients with AS from Northern Sweden (Modif NY, mean age 55.3 $\pm$ 11.2 years, 102(68.5%) men, 146(98%) HLAB27) were assessed with spinal radiographs for mSASSS, clinical examination and BASMI, BASFI, ASDAS-CRP and BASDAI. Forty-six patients with AS (50.4 $\pm$ 8.7 years, 31(67%) men) and 46 age- and sex-matched controls (49.8 $\pm$ 9.2 years, 31(67%) men) with no known hypertension, diabetes or previous CV events were compared. Bilateral CCA ultrasound was carried out on all patients and controls. The circumferential systolic strain was measured and the β stiffness index was calculated. To analyze factors associated with strain and β stiffness index univariate and standard multivariable linear regression analyses were used. Variables with a univariate p-value ≤ 0.1 were considered for the multivariable models. For dichotomous variables, yes was coded 1 and no was coded 0.

Results: The mean strain was significantly lower in AS patients compared with controls, 7.9 $\pm$ 2.6% vs 10.3 $\pm$ 1.9%, $p < 0.001$ and the mean β stiffness index was significantly higher in AS compared to controls, 13.1 $\pm$ 1.6 mmHg/mm vs 12.3 $\pm$ 1.3 mmHg/mm, $p = 0.018$.

Conclusion: Both CCA strain and β stiffness index differed significantly between AS patients and controls indicating a worse subclinical arterial status in AS. The CCA strain was associated with several AS related variables while the β stiffness index with age and smoking indicating that the methods complement each other in the assessment of distensibility of arteries in patients with AS.

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SAT0326 PLANS FOR MOTHERHOOD ARE CHANGED AFTER DIAGNOSING ANKYLOSIS SPONDYLITIS (AS). AS FEMALE PATIENTS' ATTITUDE TO THE USE OF AS MEDICATIONS DURING PREGNANCY PLANNING AND CONCEPTION

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Background: Plans for motherhood are changed after diagnosing ankylosing spondylitis (AS). AS female patients' attitude to the use of AS medications during pregnancy planning and conception.

Objectives: To describe the impact of diagnosing AS on woman's plans to have children, and patients' attitude to continuing AS therapy while planning pregnancy or after definite conception.

Methods: 302 AS female patients participated in the survey conducted from May to November 2018. Patient's mean age was 32.4 $\pm$ 6.0 years, average AS duration from onset of symptoms was 10.2 $\pm$ 7.4 years. 224 (74.2%) respondents had higher education, 68 (22.5%) – vocational college education and 10 (3.3%) – secondary education. Totally 492 pregnancies were reported in 214 (70.9%) respondents, including 278 pregnancies before AS onset, while 214 occurred with underlying AS.

Results: 206 women (68.2%) have changed their attitude to potential pregnancy occurring during AS:

- 12 (5.8%) were firmly set to terminate an unplanned pregnancy;
- 21 (10.2%) were giving up on pregnancy because they already have children born before AS onset;
- 9 (4.4%) were against getting pregnant, although they yet haven't had children;
- 164 (79.6%) accepted potential pregnancy, although recognizing they would experience continuous emotional discomfort and fear for their own health and health of the unborn child.
- 42 (13%) women were distinctly against getting pregnant in case they have AS.

There was a weak inverse correlation between AS duration and changing patients' attitude to pregnancy ($R = -0.14$, $p < 0.05$).

150 (49.7%) respondents discussed pregnancy planning with a rheumatologist. Women with university degree were more likely to consult a rheumatologist before trying for a baby compared to subjects with vocational college and secondary education (55.5%, 35.3% and 40%, respectively; $p = 0.02$). 53 (35.3%) patients failed to receive a comprehensive answer to their questions related to AS and pregnancy mutual influence, the probability of AS inheritance by a child, safety of AS therapy at conception