Abstract SAT0274 – Figure 1. CZP survival in AS and nrAxSpA patients

Abstract SAT0274 – Figure 2. CZP survival in patients with and without history of TNFi use before CZP

Conclusions: In this single centre biological SpA cohort, adherence to CZP therapy seems to be high with a first year survival rate of 83% and there was no difference between AS and nrAxSpA patients.

Disclosure of Interest: None declared

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SAT0275 VITAMIN D INSUFFICIENCY IS ASSOCIATED WITH VERTEBRAL FRACTURES IN PATIENTS WITH AXIAL SPONDYLOARTHRITIS

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Background: Vitamin D insufficiency is common in general population, and it has been associated with the development and activity of several diseases, such as cardiovascular and autoimmune diseases. In patients with axial spondyloarthritis (axSpA) vitamin D (25(OH)D) insufficiency has been associated with disease activity, but studies in these patients that associate 25(OH)D insufficiency with vertebral fractures (VF) are scarce.

Objectives: To evaluate the associations between 25(OH)D levels and VF, as well as the 10 year-estimated risk (FRAX) and low bone mineral density (BMD), in patients with axSpA.

Methods: Cross-sectional study of patients with axSpA (ASAS criteria); 25(OH)D insufficiency when <30 ng/mL and BMD measured by Lumbar spine (LS) and femoral neck (FN) Dual X-ray absorptiometry (DXA). Evaluation of VF with semi-quantitative method (Genant) in thoracolumbar X-rays. Bivariate and multivariate analyses performed, and p values <0.05 considered significant.

Results: We included 206 axSpA patients (70% male; 86% AS714% nr-axSpA); age 52±14 and disease duration 12.9±10.3 years; ASDAS-CRP 2.2±0.9, ASDAS-ESR 2.5±0.9; total mSASSS 20.5±19.1 and 25(OH)D levels 19.8±9.3 ng/mL (all values are mean ±SD); with 85.7% of the patients having insufficiency; VF were observed in 34% of the patients. The prevalence of low BMD was higher in FN 45.2% (z-score) and 28.9% (t-score) than in LS 25.7% (z-score) and 29.9% (t-score).

These differences were even higher when 25(OH)D insufficiency was also present (table).

In multivariate analysis, 25(OH)D was associated with FN BMD (p=0.001); without association with LS BMD. Vitamin D insufficiency was directly associated with the presence of VF [OR 0.95 (95%CI 0.86–0.98); p=0.029] and a higher 10 year-estimated risk of fracture (major FRAX [OR 0.92 (95%CI 0.81–0.96); (p=0.036)].

Differences between axSpA patients with/without 25(OH)D insufficiency			
	Insufficiency	No insufficiency	p value
Patients (%)	85.7%	14.3%	
Vertebral fractures (%)	38.7%	32.48%	p=0.049
FRAX major	8.7±6.7	7.5±6.4	p=0.036
BASDAI	4.2±2.2	3.1±1.3	p=0.003
BASFI	3.8±2.5	3.0±2.4	p=0.000
ASDAS-CRP	2.21±0.15	1.89±0.16	p=0.003
ASDAS-ESR	2.72±0.21	2.19±0.25	p=0.002
Low FN BMD (%)	56.4%	44.6%	p=0.014
FN t-score	0.80±0.31	0.92±0.44	p=0.002
FN z-score	0.84±0.28	0.9±0.31	p=0.002

Values are mean ±standard deviation (SD) unless otherwise specified.

Conclusions: In patients with axSpA, vitamin D insufficiency is even more generalised than in general population. Low 25(OH)D is associated with lower FN BMD and more vertebral fractures, as well as increased disease activity and disability. Vertebral fractures are a serious complication of axSpA, so 25(OH)D insufficiency should be taken into account in the management of the comorbidities of the patients with axial spondyloarthritis.

REFERENCES:

- [1] Cai G, et al. Clin Chim Acta 2015 Jan 1;438:316–22.
- [2] Carmona L, et al. grupo ESPOGUA. Reumatol Clin 2010 Mar;6(Suppl 1):1–5.
- [3] Davey-Ranasinghe N, et al. Curr Opin Rheumatol 2013 Jul;25(4):509–16.

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SAT0276 UVEITIS DURING ANTI-TNF THERAPY IN PATIENTS WITH AXIAL SPONDYLOARTHRITIS: A PARADOXICAL EVENT OR DISEASE MANIFESTATION?

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Background: Although widely recognised as extra-articular manifestations of axial spondyloarthritis (axSpA), uveitis developing throughout anti-TNFα treatment is difficult to be classified as disease related or paradoxical event.

Objectives: We aimed to evaluate the incidence of new onset or relapsing uveitis in patients with axSpA receiving TNF inhibitors.

Methods: We performed a cross-sectional retrospective study evaluating 126 consecutive active axSpA exposed to TNFα inhibitors according to the local recommendations, followed-up in a single rheumatology department. Patients identified with uveitis were systematically assessed based on a predefined protocol comprising (i) *data about uveitis* (*de novo* or flare; unique episode or recurrence; acute or chronic; anterior, posterior, intermediary or panuveitis; uni or bilateral; outcomes), (ii) *responsible medication* (drug exposure prior to uveitis, biologic-naïve or experienced axSpA, continuation or switching to another biologic) and (iii) *rheumatic condition* (activity, response to treatment, extra-articular manifestations, disease duration).

Results: 91 biologic naïve axSpA and 35 receiving more than one anti-TNFα were recruited; among them, 318 patient-years exposed to etanercept, 225.37 patient-years to adalimumab, 113.52 patient-years to infliximab, 30.49 patient-years on golimumab. A history of uveitis was found in 27.77% (35 cases).

We reported 12 patients developing at least one episode of uveitis during biologic treatment (7 *de novo*, 10 recurrent uveitis); etanercept was mostly associated with uveitis (8 episodes, 2.51 per 100 patient-years), but also monoclonal antibodies, 3 with golimumab (9.83 per 100 patient-years), 2 under infliximab (1.76 per 100 patient-years), surprisingly, 3 with adalimumab (1.33 per 100 patient-years). Only 3 axSpA had uveitis before starting anti-TNFs.

Uveitis was described irrespective of the prior exposure to biologics, mainly in biologic-naïve patients, aged between 26 and 72, with disease duration of 6 to 38 years, occurring any-time during biologics (2–116 months). Acute anterior uveitis was commonly reported, only one case of complicated panuveitis.

3 cases (one infliximab, two golimumab) had benefit with switching to another TNF blocker, but in most reported cases uveitis was solved without anti-TNFα

interruption. Further, continuation of the same anti-TNF α did not cause relapse in some cases.

The underlying SpA was well controlled (ASDAS-CRP) when uveitis, patients being classified as responders compared to previous visit, suggesting paradoxical uveitis.

Conclusions: Although rare, new onset or flare of uveitis may occur during anti-TNF therapy in axSpA. Surprisingly, not only TNF receptor but also monoclonal antibodies were responsible, etanercept being involved mainly in new onset uveitis.

Disclosure of Interest: None declared

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SAT0277

IMMUNOGENICITY AND LOSS OF RESPONSE TO TNF INHIBITORS IN AXIAL SPONDYLOARTHRITIS: RESULTS FROM AN OBSERVATIONAL COHORT STUDY

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Objectives: We aimed to evaluate the immunogenicity of TNF- α inhibitors and to assess potential influence on serum drug levels and clinical efficacy in patients with axial spondyloarthritis (axSpA).

Methods: We performed a cross sectional observational cohort study in 87 consecutive axSpA receiving anti-TNFs (either for the first time or switched), followed-up in a single outpatient rheumatology department. Treatment with anti-TNF agents was recommended in accordance with the local regulations on the initiation and continuation of biologics, as well as ASAS/EULAR guidelines. Disease activity scores were assessed at baseline (V1) and study visit (V2), while drug trough levels and anti-drug antibodies were measured in serum samples (ELISA, Progenika) and collected before the next administration as a single-point data. Serum drug levels were considered positive if >0.035 μ g/mL IFX, >0.024 μ g/mL ADL and >0.035 μ g/mL ETN, while the cut-offs for anti-IFX was 5AU/mL, anti-ADL 10AU/mL, anti-ETN 142 AU/mL. Statistical analysis was performed using SPSS version 19.0, p<0.05.

Results: Among 150 axSpA treated with TNF inhibitors in our centre, 28 (32.18%) receiving adalimumab (ADL), 19 (21.83%) infliximab (IFX) and 40 (45.97%) etanercept (ETN) were included in the immunogenicity analysis. Only 11 patients (12.64%) developed anti-drug antibodies, 8 under ADL (28.57%) and 3 under IFX (15.78%), with significant decrease in drug levels (3.97 μ g/mL vs. 0.07 μ g/mL ADL, p<0.05; 1.82 μ g/mL vs. 0.05 μ g/mL IFX, p<0.05) and impact on disease outcomes (p<0.05).

Higher disease activity scores (BASDAI, ASDAS-CRP) were reported in anti-drug positive axSpA irrespective of the background therapy (p<0.05), with more patients classified as being in a high or very high disease activity status at V2. Furthermore, a relation between clinical improvement (change in ASDAS) and immunogenicity was reported: positive anti-drug antibodies axSpA achieved worse clinical response than negative anti-drug antibodies cases, with a significant association between ADL respectively IFX levels and ASDAS (p<0.05). No anti-drug antibodies were found in patients treated with ETN; significant higher persistence on ETA than under monoclonal antibodies was registered in our axSpA (p<0.05).

Conclusions: Immunogenicity may impact disease outcomes and drug survival, particularly in the adalimumab and infliximab treated axSpA. Measuring anti-drug antibodies and serum drug levels may help to optimise therapeutic strategies in selected patients.

Disclosure of Interest: None declared

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SAT0278

NSAIDS REDUCES RADIOGRAPHIC PROGRESSION IN SACROILIAC JOINTS IN EARLY AXIAL SPONDYLOARTHRITIS

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Background: According to the ASAS-EULAR management recommendations for axial spondyloarthritis (axSpA) patients (pts) suffering from pain and stiffness should use an NSAIDs as first-line drug and for pts who respond well to NSAIDs continuous use is preferred if symptomatic otherwise. Two studies have suggested that the continuous use of NSAIDs in patients with an elevated CRP results in reduced progression of structural damage in the spine in comparison to on-demand use.^{1,2} But up-to-date the question of the effect of NSAIDs on radiographic progression in early axSpA remains open.

Objectives: To compare continuous and on-demand treatment groups on radiographic progression sacroiliac joints (SIJ) in axSpA.

Methods: The research included 68 pts with early axSpA^{ASAS criteria, 2009} from Moscow CORSAR cohort with disease duration <5 years, age onset <45 years and at least 2 years follow up (FUP). 33 (48.5%) males, pts mean age was 28,5 (5,8) y., average disease duration – 24,1 (15,4) mo, 63 (92,6%) pts were HLA-B27 positive. Pts were randomised into two treatment groups: group 1 – continuous uses of NSAIDs; group 2 – on-demand uses of NSAIDs. The dosages of NSAIDs accounted by the ASAS NSAID index. At baseline 6 pts received TNF inhibitors, after 2 y. FUP 14 pts receives TNF inhibitors.

Results: No significantly differences in axSpA disease activity between two groups at baseline (table 1) and after 2 y. FUP (table 2). At group №1 8,2% pts has radiographic progression in SIJ (from nr-axSpA to AS), at group №2%–13,3% pts (p=0,000).

Abstract SAT0278 – Table 1. Outcome parameters at baseline.

	Group №1 (n=31)	Group №2 (n=31)	p
Ankylosing spondylitis, n,%	22 (70,9%)	15 (50,0%)	0088
Non-radiographic axSpA, n,%	9 (29,1%)	17 (50,0%)	0257
ASDAS CRP, Me, [25%; 75%]	2,5 ^{1,5} ; 3,5	2,3 ^{1,2} ; 2,7	0300
BASDAI, Me, [25%; 75%]	4,0 ^{2,4} ; 5,1	2,8 ^{1,5} ; 4,4	0299
CRP, Me, [25%; 75%]	5,1 ^{1,7} ; 20,0	4,5 ^{1,0} ; 12,8	0648
BASFI, Me, [25%; 75%]	1,4 [0,5; 2,5]	0,5 [0,2; 1,7]	0152
Positive MRI of the SIJs, n,%	22 (70,9%)	15 (50,0%)	0088
LEEDS score, Me, [25%; 75%]	1,0 [0; 3,0]	0,5 [0; 2,0]	0217

Abstract SAT0278 – Table 2. Outcome parameters after 2 years of NSAIDs treatment.

	Group №1 (n=24)	Group №2 (n=30)	p
Ankylosing spondylitis, n,%	19 (79,1%)	19 (63,3%)	0201
Non-radiographic axSpA, n,%	5 (20,9%)	11 (36,7)	0229
ASDAS CRP, Me, [25%; 75%]	1,2 [0,9; 2,4]	1,3 [0,7; 2,1]	0754
BASDAI, Me, [25%; 75%]	2,1 ^{1,0} ; 3,0	1,8 [0,9; 2,4]	0553
CRP, Me, [25%; 75%]	1,9 [0,85; 11,3]	1,3 [0,6; 5,0]	0292
BASFI, Me, [25%; 75%]	0,4 [0,1; 2,1]	0,1 [0; 0,4]	0,0097
Positive MRI of the SIJs, n,%	8 (33,3%)	8 (26,6%)	0573
LEEDS score, Me, [25%; 75%]	0 [0; 1,0]	0 [0; 2,0]	0571
NSAID index, Me, [25%; 75%]	100 ^{58,5} ; 100	28,5 ^{10,7} ; 75,0	0,0012

Conclusions: The frequency of NSAIDs treatment does not affect on the activity of axSpA. Continuous uses of NSAIDs reduces radiographic progression in sacroiliac joints in pts with early axSpA.

REFERENCES:

- [1] Wanders A, et al. Nonsteroidal antiinflammatory drugs reduce radiographic progression in patients with ankylosing spondylitis: a randomized clinical trial. *Arthritis Rheum* 2005;52:1756–65.
- [2] Kroon F. et al. Continuous NSAID use reverts the effects of inflammation on radiographic progression in patients with ankylosing spondylitis. *Ann Rheum Dis* 2012;71:1623–9.

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SAT0279

COMPARISON OF RETENTION RATES BETWEEN TUMOUR NECROSIS FACTOR- α INHIBITORS IN ANKYLOSING SPONDYLITIS PATIENTS: DATA FROM THE KOREAN COLLEGE OF RHEUMATOLOGY BIOLOGICS REGISTRY

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Background: Drug persistence of tumour necrosis factor- α inhibitors (TNFi) tends to be higher in patients with ankylosing spondylitis (AS) than rheumatoid arthritis but there are few studies of Asian AS patients in the literature.

Objectives: To investigate drug retention rates of various TNFi used in Korean AS patients.