

by spring (24.1%), fall (22.8%), and winter (20.3%). The clinical and laboratory characteristics at presentation are shown in Table 1. Muscle biopsy was performed in 93% of patients. Notably, patients with swallowing difficulties had more commonly had Raynaud phenomenon (RR 3.7 (95% CI 1.4–9.4),  $p=0.008$ ).

**Table 1. The clinical and laboratory characteristics at presentation**

	# (%)
Myositis	72 (91)
Skin rash	42 (53)
Weight loss	35 (44)
Interstitial lung disease	29 (37)
Swallowing difficulties	31 (39)
Arthritis	20 (25)
Raynaud phenomenon	14 (18)
Fever	9 (11)
median ESR	27 (16-45)
MEDIAN CRP	7 (1-22)
Hep-2 test: ANA ( $\geq 1:160$ )	41 (52)
Hep-2 test: nonspecific cytoplasmic IF	20 (25)
Anti-ENAs	43 (54)
aJo-1	17 (22)
aPL-12	3 (4)
aMI-2	2 (2.5)
aPM/Scl	5 (6)
aKu	1 (1.3)
aU1-RNP	1 (1.3)
ACA	1 (1.3)
aRo	6 (8)
aSRP	1 (1.3)
aSAE	1 (1.3)
3HHMGCoAR	3 (4)
RTE/HSE	19 (24)
Histopathologically proven IM	86.5%

Legend: ACA – anti-centromere antibodies, ANA – anti-nuclear antibodies, anti-ENAs – autoantibodies against extractable nuclear antigens, CRP – C-reactive protein, EMG – electromyogram, ESR – erythrocyte sedimentation rate, RTE/HSE – rabbit thymus extract/human spleen extract used in the in-house anti-ENA counter-immuno-diffusion assay, IF – immunofluorescence, IM – inflammatory myopathy.

**Conclusions:** The averaged 12-year annual incidence of IM in the population under study was 9.4 (95% CI 7.5–11.8) per  $10^6$  adults.

#### References:

[1] Meyer A, et al. *Rheumatology* 2015.

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## Spondyloarthritis - treatment

### AB0683 TROUGH INFLIXIMAB LEVELS AND ANTI-INFLIXIMAB ANTIBODIES IN SPONDYLOARTHRITIS PATIENTS ON TREATMENT WITH LOW DOSE INFLIXIMAB: A SINGLE CENTRE CROSS-SECTIONAL STUDY

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**Background:** Infliximab (IFX) is an anti-TNF, chimeric, monoclonal antibody approved for use in refractory spondyloarthritis (SpA). Studies done in patients with Rheumatoid arthritis<sup>1</sup> and Inflammatory bowel disease<sup>2</sup> have demonstrated the clinical utility of the measurement of serum trough IFX and antibodies to IFX (ATI). In India, many centres including ours use IFX at lower doses of 3–5 mg/kg and on demand IFX treatment without the use of the loading dose IFX in SpA patients<sup>3</sup>. Data on the utility of measuring trough IFX and ATI levels and their correlation with disease activity in such group of patients is lacking.

**Objectives:** To evaluate the co-relation between trough Infliximab levels and disease activity measures, viz ASDAS ESR and ASDAS CRP in SpA patients on low dose IFX therapy

To compare the mean ASDAS- ESR/CRP scores between ATI positive and ATI negative patients

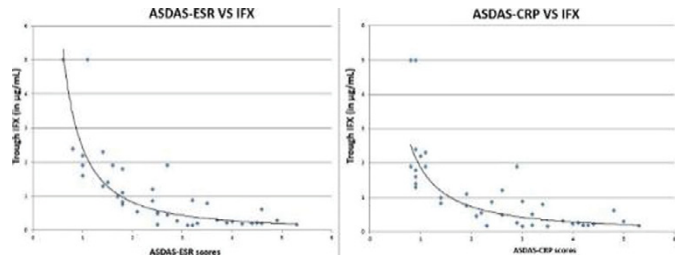
**Methods:** Thirty-nine adult spondyloarthritis patients in the age group of 18–70 years, meeting the ASAS classification criteria for peripheral and/or axial spondyloarthritis were recruited into the study. The inclusion criteria required the patients to have had received three or more infusions of IFX at 3–5 mg/kg/dose over the past 6 to 9 months. Blood samples were collected between two to three months after the previous IFX infusion for the measurement of the ATI and the trough IFX levels using the Matriks Biotek Shikari Q-ATI ELISA and Q-IFLIXI ELISA kits respectively. At the same time, disease activity of the patients was quantitated using ASDAS ESR and ASDAS CRP scores.

Correlation between the ASDAS scores and the trough IFX levels was analysed by Pearson's product moment correlation assay. The difference in mean trough IFX and ASDAS scores between the ATI positive and ATI negative patients were assessed using Welch two sample t-test.

**Results:** There was a moderately significant negative correlation between the trough IFX levels and the ASDAS-ESR ( $r = -0.69$ ,  $p < 0.001$ ), ASDAS-CRP scores ( $r = -0.67$ ,  $p < 0.001$ ) (Fig 1). ATI positive patients in comparison to ATI negative, had significantly higher ASDAS ESR and ASDAS CRP scores (Table 1).

**Table 1. Table showing differences in ASDAS scores between ATI positive and negative patients**

	ATI +ve patients	ATI -ve patients	P value
Mean ASDAS ESR	3.13	1.56	<0.001
Mean ASDAS CRP	3.06	1.45	<0.001



**Conclusions:** SpA patients from India on low dose, on demand IFX therapy, have both the trough IFX and ATI correlate significantly with the measures of disease activity. Therefore, these may be used in addition to clinical activity scores for a more cost effective on demand IFX therapy in SpA patients, especially in an expense constrained country like India.

#### References:

[1] Laine J, Jokiranta T, Eklund K, Vakevainen M, Puolakka K. Cost effectiveness of routine measuring of serum drug concentrations and anti-drug antibodies in treatment of rheumatoid arthritis patients with TNF $\alpha$  blockers. *Biologicals: Targets and therapy*. 2016;10:67–73.

[2] Pallagi Kunstar E, Farkas K, Szepes Z et al. Utility of serum TNF $\alpha$ , infliximab trough level and antibody titres in inflammatory bowel disease. *World J Gastroenterol*. 2014;20:5031–5.

[3] Kumar A. Experience with anti-tumour necrosis factor- $\alpha$  therapy in India. *APLAR journal of Rheumatology*. 2006;9:136–41.

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### AB0684 CLINICAL RESPONSE AND RADIOGRAPHIC PROGRESSION IN ANKYLOSING SPONDYLITIS PATIENTS UNDER ANTI-TNF THERAPY: IMPACT OF HIP INVOLVEMENT

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**Background:** Hip involvement is considered an important prognostic factor associated with radiographic progression in ankylosing spondylitis (AS) patients. However, there are no studies regarding hip involvement impact on clinical response and radiographic progression in AS patients under anti-TNF therapy.

**Objectives:** Compare clinical and radiographic progression in AS patients receiving anti-TNF therapy with and without moderate-severe hip involvement.

**Methods:** Forty-seven AS patients referred to receive anti-TNF treatment were included and classified according to baseline hip involvement based on Bath Ankylosing Spondylitis Radiology Hip Index (BASRI-Hip): none-minimal hip disease (hip grade <3) or moderate-severe disease (hip grade  $\geq 3$ ). Demographic data, presence of HLA-B27, extra-articular involvement, DMARD and NSAID use, clinical and laboratory disease parameters (BASDAI, BASMI, BASFI, ASQoL, mSASSS and inflammatory markers) were assessed at baseline and two years after anti-TNF treatment.

**Results:** Thirty-four (72.3%) patients were classified as none-minimal hip disease and 13 (27.7%) as moderate-severe hip involvement. Both groups were similar at baseline considering age, HLA-B27, extra-articular involvement and comedication use. Laboratory markers (ESR, CRP) and disease parameters (BASDAI, BASFI and mSASSS) showed no difference at baseline. Moderate-severe group had longer disease (10.0 $\pm$ 7.6 vs. 14.9 $\pm$ 8.6,  $P=0.002$ , years), higher BASMI (3.8 $\pm$ 2.4 vs. 6.5 $\pm$ 2.5,  $P=0.002$ ) and lower ASQoL (13.7 $\pm$ 4.4 vs. 9.9 $\pm$ 4.9,  $P=0.007$ ). After two-years of anti-TNF therapy, both groups presented similar BASDAI response (delta BASDAI,  $p=0.134$ ; final BASDAI,  $p=0.324$ ) and an increase in mSASSS [no-minimal involvement: 13.6 $\pm$ 18.3 vs. 16.1 $\pm$ 19.4,  $P < 0.001$ ]; moderate-severe involvement: 21.7 $\pm$ 19.9 vs. 28.6 $\pm$ 18.5,  $P=0.003$ ]. At final evaluation patients with moderate-severe hip involvement presented higher mSASSS (28.6 $\pm$ 18.5 vs. 16.1 $\pm$ 19.4,  $P=0.02$ ), despite similar delta BASDAI and final BASDAI.

**Conclusions:** Our study provides evidence that hip involvement did not impact on clinical response in AS patients under anti-TNF therapy but may have an effect on radiographic progression of these patients.