occurred especially in those patients who discontinued TNFi early in pregnancy and with axial involvement. When resumed during pregnancy, TNFi was able to control the disease. At preconception counselling, the continuation of TNFi during pregnancy should be considered to ensure a better control of disease.

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SAT0369

SPINAL RADIOGRAPHIC PROGRESSION IN EARLY SPONDYLOARTHRITIS: SIX-YEAR RESULTS FROM THE ESPERANZA COHORT

E. De Miguel¹, J. F. García Llorente², C. Urrego-Laurín³, M. L. García-Vivar⁴, C. Fernández-Carballido⁵, M. D. C. Castro Villegas⁶, B. Joven-Ibáñez⁷, X. Juanola-Roura⁷, C. Tornero¹, E. Galindez⁸ on behalf of Esperanza Working Group. ¹Hospital Universitario La Paz, Rheumatology, Madrid, Spain; ²Hospital de Galdakao, Rheumatology, Bilbao, Spain; ³Hospital Universitario Moncloa, Rheumatology, Madrid, Spain; ⁴Hospital Universitario Basurto, Rheumatology, Bilbao, Spain; ⁵Hospital Universitario Reina Sofía, Rheumatology, Madrid, Spain; ⁶Hospital Universitario Reina Sofía, Rheumatology, Córdoba, Spain; ⁷Hospital Universitario de Bellvitge, Rheumatology, Barcelona, Spain; ⁸Hospital Universitario de Basurto, Rheumatology, Bilbao, Spain

Background: There are few studies focused on the development of structural damage over time in patients with early SpA

Objectives: The aim of this study is to analyze the mSASSS radiographic progression of spine in patients with early spondyloarthritis (SpA) in the Esperanza cohort.

Methods: In this longitudinal study, 49 patients of the Spanish early spondyloarthritis (SpA) Esperanza cohort were included. Every patient had a baseline and a six years lateral X-Ray of the cervical and lumbar of spine. The assessment of spine structural damage was done by the modified Stoke Ankylosing Spondylitis Spine Score (mSASSS). Nine readers, blinded for the diagnosis, participated in the reliability exercise, all of them experienced rheumatologists and members of the Spanish spondyloarthritis working group (GRESER). The mSASSS progression and development of new syndesmophytes was analyzed. The gold standard of every elemental lesion of the mSASSS and the total mSASSS score was the agreement achieved by the independent categorical opinion of at least five of the nine readers. For reliability, intraclass correlation coefficient (ICC) two-way mixed, absolute agreement was used.

Results: Forty-nine patients were included, 69 % were males and 49%, HLA B27 positive. Mean $\pm$ SD baseline ESR, CRP, BASDAI, BASFI and mSASSS were 10.7 $\pm$ 11.7, 5.4 $\pm$ 7.1, 3.7 $\pm$ 2.5, 2.1 $\pm$ 2.0 and 0.326 $\pm$ 0.85, respectively. Inter-reader ICC reliability of the 9 readers was 0.812 (CI 95%; 0.764-0.857). The mSASSS score at the six-year visit was 0.67 $\pm$ 1.6: thirty-nine patients did not present any changes in this score at the end of the follow-up, two patients had Δ mSASSS of -1 and eight patients, an increase in this score (four patients, +1; three patients, +2 and one patient, +9 points).

At baseline, five patients presented one syndesmophyte; at the six-year visit, seven had one syndesmophyte; one patient, two syndesmophytes and another one, one bone bridge. Only 2/5 patients (40%) with syndesmophytes at baseline showed an increase in Δ mSASSS; the two patients with a Δ mSASSS of -1 did not have syndesmophytes at baseline. Five out of eight patients (62.5%) with an increase of the Δ mSASSS presented this lesion at the six-year visit but only two of them showed syndesmophytes at baseline. On the other hand, two of the three patients who showed an increase of the Δ mSASSS without syndesmophytes at baseline presented an erosion in the anterior vertebral corner and the patient with the bone bridge had a previous syndesmophyte. Our results indicate that in early SpA much of the progression appears in patients without previous syndesmophytes.

Conclusion: Spinal radiographic progression was very low in our early SpA cohort, with a mean progression of 0.3 mSASSS units. Only eight patients (16.3%) presented spinal structural progression, most of them not showing syndesmophytes at baseline. It is reasonable to consider that an early diagnosis and monitoring could result in a low radiographic progression.

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SAT0370

TUMOUR NECROSIS FACTOR INHIBITOR THERAPY DOES NOT REDUCE THE INCIDENCE OF COMORBIDITIES AND EXTRA-ARTICULAR MANIFESTATIONS IN ANKYLOSING SPONDYLITIS: AN ANALYSIS OF THREE US CLAIMS DATABASES

A. Deodhar¹, K. Winthrop¹, R. Bohn², B. Chan¹, R. Suruki², J. Stark³, H. Yun⁴, S. Siegel¹, L. Chen⁴, J. Curtis⁴. ¹Oregon Health & Science University, Portland, United States of America; ²UCB Pharma, Raleigh, United States of America; ³UCB Pharma, Smyrna, United States of America; ⁴University of Alabama at Birmingham, Birmingham, United States of America

Background: Comorbidities and extra-articular manifestations (EAMs) substantially increase disease burden and mortality risk in patients (pts) with ankylosing spondylitis (AS).^{1,2} Tumour necrosis factor inhibitors (TNFi) are highly efficacious and effective in AS treatment (tx), and are used after inadequate response to non-steroidal anti-inflammatory drugs.^{3,4} However, the impact of TNFi on the incidence of comorbidities and EAMs in pts with AS is unknown.⁵

Objectives: To determine the incidence of comorbidities and EAMs in TNFi vs non-TNFi treated pts with AS in the US.

Methods: This was a retrospective, observational cohort study using data from 3 healthcare insurance claims databases: Multi-Payer Claims Database (MPCD Optum Insight; 2007–2010), Truven MarketScan[®] (2010–2014) and US Medicare Fee-for-Service Claims database (2006–2014). Eligible pts: ≥ 20 years (yrs) for MarketScan/MPCD or ≥ 65 yrs for Medicare, had an AS diagnosis (≥ 2 International Classification of Disease, 9th version [ICD-9] diagnosis codes of 720.0 from a rheumatologist) and ≥ 12 months' continuous medical and pharmacy enrolment prior to AS diagnosis (AS index date). Pts with AS not receiving tx were excluded. Tx exposure was reported from the first date of a new prescription/administration of an AS tx (no prior exposure) after the AS index date. Crude incidence rates (IR; shown as cases/100 pt-yrs) were calculated for EAMs (uveitis, psoriasis [PSO], psoriatic arthritis [PsA], inflammatory bowel disease [IBD]), with follow-up until the earliest of: death, lost medical/pharmacy coverage, study period end, first outcome occurrence, tx switch/discontinuation. Hazard ratios (HRs) of comorbidities (hospitalised infection, solid cancers) and EAMs for propensity score (PS)-matched pt groups were calculated using Cox proportional hazard regression models. Pts with the specific comorbidity/EAM of interest prior to AS index date were excluded. PS analyses assessed probability of TNFi initiation vs non-TNFi tx and adjusted for factors including comorbidities and demographics. HRs with confidence intervals crossing 1 are not reported.

Results: 20,460 pts with AS were eligible (MPCD: 2,384; MarketScan: 9,032; Medicare: 9,044). In all databases, crude IR of EAMs were higher for TNFi vs non-TNFi treated pts (**Figure 1**). In the PS-matched cohort, incidences of hospitalised infections were lower in TNFi vs non-TNFi treated pts from the MarketScan and Medicare databases (**Figure 2**). Higher incidences of solid cancers and EAMs were observed in TNFi vs non-TNFi treated pts; Medicare data (**Figure 2**). A higher risk of PsA and PSO was seen in TNFi vs non-TNFi treated pts; MarketScan data (**Figure 2**). PS-matched cohort data from the MPCD database were non-significant.

Conclusion: Despite strong efficacy in treating AS-related signs and symptoms, similar incidence of comorbidities and increased incidence of some EAMs (IBD, PSO/PsA, uveitis) was seen in TNFi vs non-TNFi treated pts in the PS-matched analyses. This may be due to channelling of pts with more severe AS to receive TNFi, despite the PS-matched analysis aiming to overcome this. Moreover, prior medical history of Medicare pts may not be captured in the database, as pts are typically older with longer disease durations. While these results confirm previous findings,⁶ a prospective observational study is required to generalise to pts outside the US.

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