AB0831

THE INFLUENCE OF REMISIVE AND ANTI-INFLAMMATORY TREATMENT ON AXIAL MOBILITY IN PATIENTS WITH ANKYLOSING SPONDYLOARTHRITIS

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Background: In advanced ankylosing spondylitis (AS), bone ankylosis or ossification of the involved joints can make the chest practically immobile, decrease its compliance, or even lead to intercostal muscle atrophy.

Objectives: The purpose of the study was to evaluate chest involvement in AS by measuring toracoabdominal movements during quiet breathing, by dividing the chest and abdominal contribution to the current volume, by inductive plethysmography methods.

Methods: 60 consecutive patients were recruited from the Rheumatology Department of the Republican Clinical Hospital. They were selected based on AS diagnosis, with no existing cardiovascular or neuromuscular diseases that would alter respiratory mechanisms and the absence of severe obesity.

Results: Monotherapy with DMARD was 27 out of 60 patients (45%) (Sulfasalazine 3 g/day) for a period of 1–48 months (mean value=19.4 (15.5) months). There were no differences in the angle of the Ct-Abd curve between patients with DMARD and DMARD-naïve treatment (38.2 (14.5)° and 34.7 (19.5)° for sitting position, 49.3 (18.1)° and 47.2 (23.1)° in orthostatism, and 19.1 (15.6)° and 16.1 (14.6)° for clinostatism, $p<0.05$). In the baseline study, the Ct-Abd patient angle was lower than the control group in sitting position (36.3 (17.3)° and 51.5 (8.9)°, $p=0.0002$) in orthostatism (48.1 (20.8)° and 62.4 (12.5)°, $p<0.01$) or orthostatism (17.4 (15.0)° and 24.5 (9.8)°, $p<0.05$). In the entire patient group, the Ct-Abd angle correlated negatively with BASFI in all three body positions ($r=-0.50$, $p<0.0001$ in the sitting position, $r=-0.36$, $p<0.01$ in orthostatism, $r=-0.47$, $p<0.0001$ in clinostatism); did not correlate with BASDAI, BASMI, or the modified Schoeber test in either of the three body positions.

In 15 AS patients who underwent repeated measurements of toracoabdominal movements while receiving their associated DMARD treatment (Methotrexate 15 mg/week and Sulfasalazine 3 g/day) 3 months after treatment, the angle of the Ct-Abd slope was significantly higher than that of the fundamental study, in all bodily positions.

The Ct-Abd angle continued to increase, with increments less pronounced and reached significant value only between measurements of 3 months and 12 months. Improvements in standardised clinical signs following associated DMARD treatment followed a similar pattern, with scores at each interval significantly different from those measured in the baseline study, improvements continuing at a faster pace slowly after the third month.

In the control group, the angle of the slope of the Ct-Abd curve was not different in the two measurements in any of the body positions (51.4 (8.9)° and 50.7 (9.3)° in the sitting position, 62.4 (12.4)° and 61.6 (11.8)° in orthostatism, and 24.6 (9.8)° and 24.8 (10.4)° in clinostatism, $p<0.05$). In orthostatism, the difference between the measurements was 0.8° (confidence interval 95%–0.9 to 2.52, upper and lower boundaries of 6.6° and 8.2°).

Conclusions: The slope of the Ct – Abd curve during quiet breathing correlates negatively with BASFI and responds significantly to associated DMARD treatment and NSAIDs. Our data suggest that this measure can be targeted for further evaluation of its usefulness in monitoring chest involvement and its response to treatment in AS patients.

Disclosure of Interest: None declared

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AB0832

THE EFFECTS OF ANTI-TNF BIOLOGICAL AGENTS IN PATIENTS WITH SPONDYLOARTHRITIS: A COMPARATIVE STUDY

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Objectives: The aim of the present study was to compare the efficacy of three anti-TNF agents (adalimumab, infliximab and etanercept) in patients with spondyloarthritis (SpA) at 24 weeks.

Methods: We achieved a retrospective descriptive and comparative monocentric study, on 49 patients, with SpA including ankylosing spondylitis (AS), psoriatic arthritis (PsA), enteropathic arthritis (EA), reactive arthritis (ReA) and undifferentiated spondyloarthritis (uSpA) (according to Amor criteria, ^{ASAS 2009} and CASPAR criteria), during 12 years (2004–2015). The patients were treated with at least one anti-TNF, during at least 6 months. Disease activity was assessed by the BASDAI, ASDAS, ESR and CRP. To compare mean differences between time points (week 0 versus week 24), a Wilcoxon test was applied. To compare efficacy between the 3 anti-TNF, a Mann-Whitney test was applied.

Results: Twenty three patients (47%) had AS, 13 patients (27%) had PsA and 11 patients (22%) had EA. One patient had an uSpA, and 1 patient had a ReA. The mean age was 42.81 years $\pm$ 11.77. The median age at disease onset was 29.41

years $\pm$ 11.29. The mean disease duration was 10.16 years. Nineteen patients received etanercept (ETN), 18 infliximab (IFX) and 12 adalimumab (ADA). At six Months, the 3 anti-TNF showed improvement in the disease activity scores: BASDAI ($p<0.0001$), ASDAS CRP ($p<0.0001$), ESR ($p<0.0001$) and CRP ($p<0.0001$). Sixty two percent of the patients have reached BASDAI 50 response at 6 months.

Abstract AB0832 – Table 1. Summary of median change from baseline to week 24 in clinical outcomes

	Week 0	Week 24	p
BASDAI	6.04 $\pm$ 2.28	2.5 $\pm$ 2.32	<0.0001
ASDAS	4.27 $\pm$ 1.13	2.17 $\pm$ 1.3	<0.0001
CRP			
CRP (mg/l)	44.68	14.03	<0.0001
	$\pm$ 33.45	$\pm$ 10.09	
ESR (mm)	62.24	25.65	<0.0001
	$\pm$ 39.16	$\pm$ 24.97	

BASDAI: Bath Ankylosing Spondylitis Disease Activity Index, ASDAS: Ankylosing Spondylitis Disease Activity Score, C-Reactive protein, ESR: Erythrocyte Sedimentation Rate

At week 24, patients on ETN achieved more frequently a significant reduction of BASDAI (–5.13 vs –2.53; $p=0.004$), ESR (–52.69 vs –16.64; $p=0.006$) and CRP (–36.7 vs –21.34; $p=0.009$) than IFX. The efficacy comparison between ETN and ADA showed ETN superiority concerning BASDAI (–5.13 vs –2.04; $p=0.004$) and ASDAS CRP (–3.03 vs –1.4; $p=0.006$). The comparison ADA vs IFX had shown no significant efficacy differences.

Conclusions: Our results showed a BASDAI 50 response in 62% of patients. The comparison between the three biologics was consistent with a better efficacy of the ETN.

Disclosure of Interest: None declared

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AB0833

REAL-WORLD EFFICACY AND SAFETY OF SECUKINUMAB: DATA FROM VERONA'S COHORT

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Background: Secukinumab has been approved for the treatment of active ankylosing spondylitis (AS) and psoriatic arthritis (PsA). Its efficacy has been demonstrated in phase III trials where eligibility criteria ensured a homogeneous population. Although this strategy reduces confounding factors, it does not guarantee the same results in the real world, where clinicians deal with advanced disease, comorbidities, adherence and persistence challenges.

Objectives: Aim of this study was to assess efficacy and safety of Secukinumab in real-world clinical practice.

Methods: Patients received Secukinumab (150 or 300 mg) at weeks 0,1,2,3 and 4 as induction therapy and then every 4 weeks as maintenance therapy. Assessment of disease activity was done at months 0,6 and 12 using DAPSA, ASDAS, BASDAI, BASFI, pain VAS.

Results: 61 patients affected by PsA (65% females, 35% males) and 29 affected by AS (70% males, 30% females) were included. 64% of patients reached 12 months follow up. Baseline characteristics of both groups are shown in the tables below.

In the PsA cohort, the median DAPSA at baseline was 19.5 (IQR 9.6), at 6 months 9.09 (IQR 6.5, $p<0.001$), at 12 months 8.53 (IQR 6.9, $p<0.001$). Median pain VAS showed a downward trend as well, from 6 at baseline (2 IQR) to 4.5 at 6 months (2 IQR) and 4 at 12 months (IQR 1.4). No differences emerged among PsA patterns. Clinical trials did not assess efficacy of Secukinumab in patients previously treated with biologic agents other than anti-TNF agents, due to exclusion criteria. We performed subgroup analysis to evaluate its efficacy in patients previously treated with Ustekinumab, finding a reduction in median DAPSA from 19.4 (IQR 9.8, $p<0.001$) at baseline to 8.7 (IQR 8.3, $p<0.001$) at 1 year.

In the AS cohort, the median BASDAI at baseline was 5.5 (IQR 2.2), at 6 months 3.6 (IQR 1.2, $p<0.001$), at 12 months 3.1 (IQR 1, $p<0.001$). Median BASFI decreased from 4.8 (IQR 2.7) to 3.8 (IQR 2.4, $p<0.001$) and 3 (IQR 2.4, $p<0.001$) at 6 and 12 months respectively. ASDAS recuded from 3.02 (IQR 1.65), to 1.21 (IQR 1.92, $p<0.001$) at 6 months and to 1.05 (IQR 0.7, $p<0.001$) at 1 years follow up. Median pain VAS dropped off from 7 at baseline (IQR 2) to 4 (IQR, $p<0.001$) at 6 months and 3 (IQR, $p<0.001$) at 12 months. Of note, patients with advanced disease (ankylosis of the spine) reported a decrease in pain and morning stiffness, thus improving their quality of life.

4 patients switched therapy at 6 months due to partial response, 1 patient experienced an expected adverse event (Candida infection). Overall, no serious side effects were observed and none resulted in Secukinumab discontinuation.

Abstract AB0833 – Table 1

Psoriatic Arthritis Cohort		Ankylosing Spondylitis Cohort	
Mean age (years)	54.3 ± 8.5	Mean age (years)	47 ± 13.4
Disease duration (years)	9.7 ± 7.9	Disease duration (years)	12 ± 9.5
Symmetrical polyarthritis	32 (52.4%)	Presence of syndesmophytes	2 (6.9%)
Asymmetrical oligoarthritis	12 (19.7%)	hDMARDs Naïve	17 (58.6%)
Spondyloarthritis	12 (19.7%)	Previous anti-TNF therapy	12 (41.4%)
Distal arthritis	4 (6.5%)		
Arthritis mutilans	1 (1%)		
hDMARDs Naïve	15 (24.6%)		
Previous anti-TNF therapy	43 (70.5%)		
Previous anti-IL1/2/3 therapy	12 (19.7%)		

Conclusions: In this first real-world cohorts of patients with PsA and AS Secukinumab has proven to be effective, regardless of PsA subtype, radiographic progression in AS and previous exposure to biologic therapy. The safety profile was favourable and similar to previous studies.

REFERENCE:

- [1] Baeten D, et al. Secukinumab, an Interleukin-17 A Inhibitor, in Ankylosing Spondylitis. NEJM 2015; 373 (26): 2534–48.

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AB0834

BETTER IMPROVEMENT OF ASDAS WERE ACHIEVED IN 841 AS PATIENTS AMONG 6 MONTHS OF ANTI-TNF USERS COMPARED TO NON-ANTI-TNF USERS: RESULTS FROM A REAL WORLD PROSPECTIVE COHORT MANAGED BY SMART PHONE SYSTEM

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Background: Ankylosing spondylitis (AS) is a chronic and progressive condition of the spine, which is the most common form of spondyloarthritis (SpA). Although anti-TNF agents are the most effective therapy for AS or SpA, it is recommended as the second-line treatment for individuals who have persistently high disease activity despite treatment with at least 2 non-steroidal anti-inflammatory drugs (NSAIDs), intolerance or contraindication to NSAIDs. Changes in ankylosing spondylitis disease activity score (ASDAS) are often measured to reflect outcomes in AS trials. However, anti-TNF does not always maintain long-term remission. There is limited evidence about remission rate of 6 months treatment from real-world AS cohorts.

Objectives: The purpose of this study is to compare the remission rate of AS patients among biologics users or non-biologics users from China Ankylosing Spondylitis/Spondyloarthritis Prospective Imaging Cohort (CASPIC).

Methods: CASPIC is an ongoing prospective cohort established by a smart management system [Smart Management System for Spondyloarthritis (SMSP)]. Clinic visits were scheduled based on visits reminder set by rheumatologists (1–6 months). Anti-TNF users were defined as patients who used biological agents during the follow-up period and the baseline was defined as the start time to use the biological agents. Non-biologics users were served as control groups. ASDAS was calculated to assess disease activity in AS. Generalised additive mixed model and curve fitting were used to show the difference between two groups.

Results: There were 841 AS patients in this cohort, 83.4% were male, with mean (±SD) age 30.8 (±8.8) years, mean time since diagnosis 8.3 (±6.1) years (table 1). Mean duration of anti-TNF treatment was 4.1 (±3.5) months. Significant improvements were observed in ASDAS (table 2). Anti-TNF users had more serious disease activity, and better clinical improvement (figure 1). If the duration of anti-TNF treatment was less than 6 months, relapsed rates were higher than those with longer than 6 months of anti-TNF (figure 1).

Abstract AB0834 – Table 1. Baseline characteristics

mean(SD)/n(%)	Anti-TNF users (n=633)	Non-anti-TNF users (n=208)	P
Age	31.2 (9.0)	29.7 (8.1)	0.040
Disease duration	8.3 (6.2)	8.4 (5.7)	0.869
ASDAS-CRP	2.1 (1.0)	2.6 (1.1)	<0.001
Male	535 (84.5%)	166 (79.8%)	0.114
HLA-B27 positivity	495 (87.3%)	176 (89.3%)	0.451
With NSAIDs	526 (99.1%)	162 (98.2%)	0.356

Abstract AB0834 – Table 2. Change in ASDAS per month

	Anti-TNF users	Non-anti-TNF users	P
Non-adjusted	–0.027 (–0.043,–0.011)	–0.065 (–0.094,–0.036)	<0.01
Adjusted	–0.032 (–0.048,–0.015)	–0.063 (–0.092,–0.033)	<0.01

Adjusted model: gender, age, disease duration, whether NSAIDs were used

A. Non-adjusted model

B. Adjusted model: gender, age, disease duration, whether NSAIDs were used

Abstract AB0834 – Figure 1. Curve Fitting of Change in ASDAS

Conclusions: Anti-TNF therapy had superior improvement than NSAIDs therapy. Anti-TNF should be used for more than 6 months to achieve better and sustained remission and prevent recurrence.

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AB0835

COMPARISON OF LONG TERM ANTI-TNF SURVIVAL IN PATIENTS WITH ANKYLOSING SPONDYLITIS AND NON-RADIOGRAPHIC AXIAL SPONDYLOARTHRITIS; DATA FROM TURKBIO REGISTRY

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Background: Limited data are available on anti-TNF survival in non-radiographic axial spondyloarthritis (nr-axSpA) patients and their long-term survival in ankylosing spondylitis (AS).

Objectives: The aim of the study was to evaluate long term survival of the first anti-TNF drug treatment among patients with AS and nr-axSpA enrolled in the TURKBIO database and to compare the discontinuation rates for infliximab (INF), etanercept (ETN), and adalimumab (ADA) in each of the two groups.

Methods: All AS and nr-axSpA patients receiving biological therapies registered in the TURKBIO database between the dates of October 2011 and April 2017 were included in the study. AS diagnosis was made according to modified New York classification criteria and nr-axSpA according to ASAS AxSpA classification criteria. Demographic and clinical data, the date of starting to use biological drug, using frequency and dose of biological drugs, BASFI, BASDAI, BASMI, ASDAS scores, date and reason for discontinuing to use drug were collected. Baseline characteristics and drug survival rates were compared between AS and nr-axSpA patients. Drug survival was calculated by the Kaplan-Meier method and risk for discontinuation among treatment groups compared by Log Rank test.

Results: A total of 924 patients were included in the study (AS, n=871 and nr-axSpA, n=53). More than half of the patients with AS were male (60.7% in AS vs 34.0% in nr-axSpA group, p<0.001). AS patients had longer symptom duration (104.90±79.06 vs 75.11±45.29 months, p<0.036) compared to nr-axSpA. Median levels of CRP and ESR were similar for nr-axSpA (CRP: 27.03±34.71, ESR: 30.50±25.77) and AS (CRP: 22.32±29.95, ESR: 35.40±22.91). The scores of