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POS0935

DO PERIPHERAL AND EXTRA MUSCULOSKELETAL MANIFESTATIONS HAVE AN IMPACT ON BIOLOGIC DMARD PRESCRIBING PATTERNS IN AXIAL SPONDYLOARTHRITIS: THE RESULTS OF TREASURE EXPERIENCE

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Background: Axial spondyloarthritis (axSpA) is a chronic inflammatory rheumatic disease mainly affecting sacroiliac joints and spine. Peripheral arthritis, dactylitis and enthesitis may also occur. Extra musculoskeletal manifestations (EMMs; uveitis [AAU], inflammatory bowel disease [IBD] and psoriasis [Pso] are among the most common ones) are important features and might have an impact on the disease burden in patients with axSpA. The presence of EMM, in particular IBD and AAU could influence the choice of TNFi however little is known regarding the role of peripheral manifestations together with the EMM on the prescribing patterns in axSpA patients.

Objectives: To examine the frequency of peripheral and EMMs in a real-world axSpA cohort and their effect on the choice of first advanced treatment.

Methods: In total 1687 axSpA patients (58% male and the mean age (±SD) was 38.5 ± 10.9) who initiated his/her first biologic were included in the present analysis. The data for the current study was obtained from the TReasure web-based registry; in which RA and SpA patients treated with bDMARDs from different regions of Turkey. Baseline demographic, disease related characteristics, peripheral and EMMs were extracted. Characteristics of patients with and without peripheral/extra-musculoskeletal involvement were compared as well as factors/covariates associated with the choice of first TNFi and secukinumab was analysed.

Results: Enthesis (28.2%) was found the most common peripheral manifestations and peripheral arthritis (26.4%) and hip arthritis (24.4%) followed it. Symptom duration to the first advanced treatment initiation was significantly shorter in axSpA patients with peripheral arthritis, enthesitis, dactylitis and psoriasis and longer in hip arthritis and AAU. HLA-B27 positivity was significantly lower in patients with arthritis, psoriasis and IBD and higher with hip arthritis and AAU. In multivariate analysis the presence of IBD is significantly associated with the preference of monoclonal TNFi (mab) over etanercept (ETA) (OR 5.770; 95%CI 1.788-18.616). However ETA was preferred in patients with hip arthritis ($p=0.003$), longer symptom duration ($p=0.049$), and using sulfasalazine ($p=0.043$). In comparison with mabs, secukinumab (SEC) prescription was found to be significantly associated with higher age ($p=0.001$), sulfasalazine ($p=0.001$) and methotrexate usage ($p=0.053$) among axSpA patients need their first advanced treatment.

Conclusion: The results of the current study confirm the pathophysiologic associations of peripheral involvement and EMM in axSpA patients. Apart from hip arthritis the presence of IBD has an impact on the prescription of advanced treatment in real-life.

Table 1. Clinical characteristics of patients in cohort

	All patients (n=1678)	Peripheral arthritis (n=445)	Dactylitis (n=81)	Enthesis (n=476)	Uveitis (n=193)	Psoriasis (n=152)	IBD (n=78)	Hip involvement (n=412)
Age, mean±SD	38,5±10,9	38,3±11,6	37,4±11,1	37,9±10,7	41,3±11,4	39,9±11,3	41,6±12,2	39,2±11,2
Male sex, n (%)	974 (57,7)	184 (41,3)	34 (42)	238 (50)	96 (49,7)	54 (35,5)	43 (55,1)	272 (66)
Symptom duration, mean month±SD	108,5±98,9	96,9±92,9	79,1±76,5	100,4±92,7	144,7±110,2	87,7±94	94,5±98	133,3±108,2
HLA B27 positivity, n (%)	621 (53,7)	142 (46,3)	27 (51,9)	174 (49,4)	104 (77)	34 (36,2)	16 (27,1)	186 (59,8)
Concomitant cDMARD usage (yes), n (%)	420 (24,9)	170 (38,2)	39 (48,1)	133 (27,9)	53 (27,5)	58 (38,2)	24 (30,8)	99 (24)
BASDAI, mean±SD	5,1±2,5	5,1±3	5,3±3,1	5,3±2,9	4,7±2,5	5,6±2,4	4,8±2,3	5,3±2,1
ASDAS-CRP, mean±SD	3,1±1,5	2,6±1,9	2,5±1,8	2,8±1,7	2,9±1,7	3,4±1,3	3,1±1,5	3,7±1,4

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POS0936

TREATMENT OF ANKYLOSING SPONDYLITIS WITH TUMOR NECROSIS FACTOR-ALPHA INHIBITORS LOWERS THE RISK OF RENAL FUNCTION DECLINE

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Background: Ankylosing spondylitis (AS) is associated with reduced renal function, possibly due to chronic inflammation or the use of nephrotoxic drugs. However, the long term effect of tumor necrosis factor (TNF) inhibitors on renal function in patients with AS has not been well established.

Objectives: We therefore investigated the association of TNF inhibitors treatment and change in estimated glomerular filtration rate (GFR) using the Korean College of Rheumatology Biologics (KOBIO) registry (ClinicalTrials.gov, NCT01965132), a prospective nationwide biologics registry.

Methods: We enrolled 1846 patients with AS in KOBIO registry and as disease controls, 471 patients with AS who did not take biologics in Kyungpook National University Hospital. The estimated glomerular filter rate (eGFR) using the Modification of Diet in Renal Disease (MDRD) equation was evaluated in both groups. Renal insufficiency was defined as eGFR <60mL/min/1.73 m². Changes and differences of eGFR in each group were assessed at every follow-up year using paired t-test. Risk factors for renal function decline were identified using multivariable analysis.

Results: The changes of eGFR values in patients treated with TNF inhibitors were not significantly decreased during 5 years follow up period. However, those in patients not treated with TNF inhibitors were significantly decreased. Moreover, among patients with renal insufficiency, use of TNF inhibitors did not affect further renal function deterioration during follow up period. Using multivariable logistic regression models, patients treated (versus not treated) with TNF inhibitors had a lower risk of renal function decline after 5 years follow up period ($p<0.045$).

Conclusion: The use of TNF inhibitors was independently associated with lower risk of renal function decline and TNF inhibitors may be a safe treatment option in AS patients with renal insufficiency.

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POS0937

TREATMENT SURVIVAL ON BIOLOGICS IN PATIENTS WITH AXIAL SPONDYLOARTHRITIS – DATA FROM MOSCOW UNIFIED ARTHRITIS REGISTRY (MUAR)

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Background: The number of new biologics in treatment of axial spondyloarthritis (axSpA) is rapidly increasing. It is important to assess timely their place in the treatment of axSpA, especially with regard to retention on therapy.

Objectives: To compare retention on therapy with different biologics in patients with axSpA.

Methods: We retrospectively analyzed the data of axSpA patients receiving biologics from the MUAR register. Predictors of retention on therapy were selected by forward stepwise variable selection within Cox regression proportional hazard model. These predictors were considered as confounders when comparing the risks of biologics withdrawal.

Results: 990 treatment episodes in 640 patients with axSpA were analyzed (non-radiographic axSpA – 4.1%, ankylosing spondylitis – 95.9%). The duration of episodes was 824±920 days. Men were 66.6%, mean age 46.4±11.4. The patients were treated with Adalimumab (ADA) (n= 252 treatment episodes), Golimumab (GOL) (n=82), Infliximab (INF) (n=167), Netakimab (NET) (n=9), Secukinumab (SEC) (n=75), Certolizumab pegol (CER) (n=66), Etanercept (ETA) (n=339).

The following predictors of withdrawal risk were identified –

1. The total duration of the disease
2. The duration of the disease before the onset of biologic treatment
3. Gender
4. Family history of non-inflammatory spondylopathy (degenerative spinal disease)
5. The line of biologic treatment
6. The level of education

The severity of radiographic sacroiliitis and HLA B-27 positivity were not associated with the risk of discontinuation of biologics.

The identified predictors were further considered as confounders. Adjusted for confounders, ETA had the lowest treatment withdrawal risk (Figure 1). ADA, GOL, INF, SEC, CER had significantly higher risk of withdrawal compared with ETA (Table 1).

Conclusion: Our analysis detected predictors associated with risk of biologics withdrawal in axSpA patients in real clinical practice. There are significant differences between biologics regarding retention on treatment.

Table 1. Hazard ratio for treatment withdrawal

Drug	Hazard ratio (Exp B)	p
ADA	1.52 [*]	0.004
GOL	2.95 [*]	0.000
INF	2.574 [*]	0.000
NET	3.680 [*]	0.073
SEC	2.133 [*]	0.005
CER	2.922 [*]	0.000

^{*} - withdrawal risk relative to ETA

Figure 1. Picture 1. Treatment withdrawal risk

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POS0938

A NEW APPROACH FOR ULTRASOUND GUIDED SACROILIAC JOINT INJECTIONS IN SPONDYLOARTHRITIS

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Background: Sacroiliac joints (SIJ) inflammation and pain is particularly common in patients with Spondyloarthritis (SpA). SIJs injections represent a valuable therapeutic option in this condition. Traditionally this procedure (irrespective of the guidance method) aims at the lower (synovial) part of the joint. However, there is growing body of evidence that enthesitis rather than synovitis is the cardinal pathological lesion in SpA. Thus, an approach targeting the more superior (ligamentous) part of the joint, with the numerous entheses of the intraspinous sacroiliac ligaments placed there, could be more beneficial in SpA patients with active sacroiliitis. The Posterior sacroiliac ligament (PSIL) is the most superficial of the SIJ ligaments, covering the other dorsally. Thus, using PSIL as a landmark and placing the needle tip beneath it, the injected solution will inevitably spread in the ligamentous portion of the joint.

Objectives: To assess the feasibility and efficacy of a new technical approach of ultrasound (US) guided SIJ injections in SpA targeting the ligamentous part of the joint.

Methods: The feasibility and efficacy of our approach was tested on 22 consecutive SpA patients, after an inform consent, with pain in the SIJ that did not respond to NSAIDs and who were otherwise on a stable medical treatment. A solution consisting of 7 mg Betamethasone (1ml) and 1% Lidocaine (1.5 ml) was administered to all injected SIJs. The efficacy of the procedure was assessed by patients reported outcome measures: mean reported pain level (on VAS), level of disability due to the back pain (Roland Morris Disability Questionnaire – RMDQ) and quality of the night sleep (Jenkins Sleep Evaluation Questionnaire – JSEQ). They were filled by the patients at baseline and two months after the intervention. Methodology of the procedure: All injections were done with patients in a prone position using an Esaote My Lab 7 machine and a linear transducer (3-12 MHz). After visualization of the SIJ cleft, the probe was slide caudally to the level of the second sacral foramen. Then the probe was rotated to a slightly oblique position with its lateral part higher and the medial part lower. In this way the probe became parallel to the PSIL, and latter is visualized sufficiently well in its long axis. Then, in this position, a 22G, 9mm spinal needle (Spinocan) was inserted at the medial side of the probe following an in-plane free-hand technique and advanced in cranio-lateral direction. When the needle tip was seen to penetrate the PSIL, and thus enter the SIJ ligamentous part, 0.2ml of the solution was injected to confirm that it spreads beneath the PSIL, rather than above or in this ligament. After that, a Color Doppler (CD) box was activated and placed over the SIJ to monitor the spread of the injected solution and ensure that it keeps below the PSIL. The whole solution was injected under this direct US and CD visualization and the needle tip was repositioned again beneath the PSIL if needed during the procedure.

Feasibility of this injection approach was assessed on the basis of the encountered difficulties in adequate visualization of the PSIL and the injected solution flow beneath it from the start until the end of the intervention.

Results: The results of the procedure, assessed in two months showed that the mean pain score decreased by 68% (VAS from 7.22±1.23 to 2.28±2.37), the disability score - by 46% (RMDQ from 11.86±5.12 to 6.42±6.39), and the sleep quality improved by 41% (JSEQ from 9.86±4.76 to 5.84±3.43). The procedure was found completely feasible by the performing operator and the visualization of the landmark (PSIL) was adequate in all patients and throughout the whole procedure. The CD allowed to confirm reliably that the solution is injected under the PSIL at any time point.

Conclusion: The SIJ injections performed by our approach and targeting the ligamentous part of the joint, proved to be completely feasible and furthermore – efficient, in alleviating the symptoms of active sacroiliitis in SpA patients.

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POS0939

WHEN DO THE ACTIVE SACROILIITIS MRI FINDINGS LOSS IN ANKYLOSING SPONDYLITIS? A RETROSPECTIVE, CROSS-SECTIONAL, OBSERVATIONAL STUDY

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