AB0663

EFFICACY OF BIOLOGICAL THERAPY IN TREATMENT OF ANKYLOSING SPONDYLITIS IN SERBIA

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Background: Patients with ankylosing spondylitis (AS) are treated in accordance with the 2016 ASAS / EULAR recommendations.

Objectives: Determine our experience and results in the treatment of AS by analysing data from the URES database collected from reference centers for the treatment of rheumatic diseases in Serbia.

Methods: Retrospective insight into the database of patients treated with biological therapy in reference centers (Institute of Rheumatology in Belgrade, Institute "Niska Banja" Special Hospital Novi Sad, KC Vojvodina and KC Kragujevac) from 2009-2018. Disease activity was monitored by the BASDAI, BASFI and ASDAScrp indexes.

Results: Of the 250 patients, 185 were male. The mean age at diagnosis was 33.02 ± 11.17 years. The mean length of treatment prior to initiation of biological therapy was 6.55 ± 7.82 years. There was a statistically significantly shorter duration of illness before the introduction of biological therapy in those who subsequently remained on the first drug (5.91 ± 7.53 vs 8.48 ± 8.48 years $p = 0.046$, $p < 0.05$). The mean age at TNF alpha inhibitor administration was 39.61 ± 11.33 years. Patients who remained on the first drug were significantly younger when starting treatment with TNF inhibitors compared with patients who changed the first drug (38.75 ± 11.29 vs 42.46 ± 11.11 years $p = 0.029$, $p < 0.05$). Those who changed the first drug were statistically longer treated with biological drugs (36.9 ± 30.03 vs 56.33 ± 32.4 months $p = 0.0001$). There were more patients with dactylitis and HLAB27 + in the group remaining on the first drug ($p < 0.05$) and more with inflammatory bowel disease in the group who had the change in drug ($p < 0.05$). The duration of etanercept therapy as the first drug was 49.11 ± 36.37 months, with the second drug 24.26 ± 27.08 , and with the third drug 43 ± 45.2 . Treatment with adalimumab as the first drug lasted for 28.34 ± 21.28 , for the second drug 21.65 ± 14.57 , for the third 3.5 months. Golimumab therapy as the first drug lasted 25.85 ± 14.58 , with the second drug 20.33 ± 19.13 , and as the third drug for 24 months. Therapy with infliximab as the first drug lasted 28.36 ± 23.52 , with the second drug 20.3 ± 20.09 , and with the third 16.5 months. According to the ASDAScrp index, 185 patients had very high disease activity (VHDA) before the first drug, high activity (HDA) 63, moderate activity (MDA) 2. At the time of the intersection, 8 had VHDA, HDA 48, MDA 106, and there were 88 patients in remission. There are 8 patients in the VHDA group who started treatment with the current drug less than 6 months ago. There are 48 patients in the HDA, of whom 17 who started treatment with the current drug less than 6 months ago, one at the time of the intersection had a urinary tract infection and high CRP, and the remaining 30 were patients with no significant decrease in ASDAS index (16 on first drug, 12 on the second drug and 2 patients on the third drug).

Conclusion: In patients with AS who do not have a good response to the first anti TNF α drug, a good option to continue their treatment is to switch to the second and third drugs of the same mechanism of action (anti TNF α drug).

KEY WORDS: ankylosing spondylitis, TNF α inhibitors, efficacy

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21. Spondyloarthritis - clinical aspects (other than treatment)

AB0664

DIAGNOSIS DELAY IN ANKYLOSING SPONDYLITIS PATIENTS IN EGYPT: FACTORS, SOCIOECONOMIC AND CLINICAL OUTCOME

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Background: Ankylosing spondylitis (AS) is a destructive inflammatory disease which was reported to have the longest diagnostic delay among the

inflammatory rheumatic disease. This lag period have a great impact on the clinical outcome and socioeconomic state of the patients. With the advent of tumor necrosis factor- α (TNF- α) inhibitors, early diagnosis in AS has become important(1).

Objectives: to evaluate the period from symptom onset to diagnosis of AS in Egyptian patients and to examine possible reasons for delayed diagnosis and its impact on the economic and social life of the patients.

Methods: The study included 87 AS patients diagnosed according to the Assessment of Spondyloarthritis international Society (ASAS) criteria (2). A face-to-face interview was applied to take medical history, and a questionnaire that contains some clinical aspects of disease was used. Diagnosis delay was described as the gap between first AS symptom and correct diagnosis of AS. Clinical and functional assessment of axial SpA measured by Bath Ankylosing Spondylitis Disease Activity Index (BASDAI), Bath Ankylosing Spondylitis Functional Index (BASFI), Bath Ankylosing Spondylitis Metrology Index (BASMI). The direct medical cost during years of delay (including costs of medical consultations, medications, investigations, physiotherapy and surgical treatment) had been estimated by Egyptian pound.

Results: The study included 87 AS patients with mean age (30.03 ± 8.3), 70 male (80.5%) and 17 female (19.5%).

Mean delay in diagnosis was (5.7 ± 4.9) years. Mean of diagnostic delay for patient diagnosed before 2010 is (14 ± 4.4) and that of patients diagnosed after 2010 is (3.5 ± 1.8) with significant difference between both (p value < 0.0001). The main cause of delay was incorrect diagnosis as follow degenerative disc disease (43/87, 49.4%), non-specific back pain (31/87, 35.6%), rheumatoid arthritis (10/87, 11.5%), rheumatic fever (2/87, 2.3%) and tuberculosis of spine (1/87, 1.1%). The mean of the medical visits was (6 ± 5.4). Most incorrect initial diagnoses were made by orthopedicians (57.9%), followed by neurologists (22.2%) followed by rheumatologist (10%) and general physicians (9.9%). Absence of extra-articular manifestations, negative family history and juvenile age are significantly associated with diagnostic delay. Delay in diagnosis is significantly associated with higher disease activity index (BASDAI), functional index (BASFI), and damage index (BASMI). The mean of the costs during years of delay is (15671.3 ± 546.1) with the mean of cost per each year delay (660.9 ± 6.6) with high significant association between the cost and longer delay in diagnosis (< 0.0001). Regarding work ability, we found that (32.2%) are fit for work, unfit (29.9%), partially fit (37.9%) with high significant difference between ability of work and shorter delay. Regarding social effect, 40.2 % of patients developed negative effect on social life with significant association to diagnostic delay (0.004).

Conclusion: Our study confirmed the importance of early diagnosis of AS due to its impact on patient's health outcome and socioeconomic state. We recommend to increase the awareness about the disease among healthcare professionals in our region.

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AB0665

VALVULOPATHY, SYSTOLIC AND DIASTOLIC DYSFUNCTION IN AXIAL SPONDYLOARTHRITIS: A SYSTEMATIC REVIEW AND META-ANALYSIS

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Background: Axial Spondyloarthritis (ax-SpA) displays an increased cardiovascular disease (CVD) risk compared with the general population. Although ischemic cardiac manifestations are well known, prevalence of non-ischemic manifestations such as myocardial dysfunction and valvulopathy is less clear.

Objectives: To compare prevalence of myocardial dysfunction and valvulopathy by ultrasound in ax-SpA patients and versus healthy controls.

Methods: Two investigators independently searched for studies indexed in PUBMED, Cochrane Library and EMBASE databases and published before January 17th 2020. The search was focused on ultrasound evaluation of myocardial

function and valvulopathy, with two-dimensional, Doppler, tissue Doppler, and speckle tracking echocardiography. We included for meta-analysis all controlled studies including ax-SpA without previous cardiovascular disease. Data were pooled using appropriate random or fixed effects model.

Results: Literature search retrieved of 186 abstracts. A total of 31 papers were included in the systematic review and 27 papers were analyzed in the meta-analysis (1,494 ax-SpA patients and 1,091 healthy controls). Studies displayed cross-sectional design and included ax-SpA without prevalent cardiovascular disease.

Ax-SpA was defined according to the modified New York criteria (24 studies) followed or the ASAS criteria (2 studies). HLA B27+ positivity ranged from 51 to 100%, mean age ranged from 26.7 to 55.7 years, disease duration ranged from 3.2 to 23.3 years and mean BASDAI ranged from 1.24 to 5.6.

Patients with ax-SpA displayed a lower diastolic function with a lower E/A ratio, a higher deceleration time, a higher isovolumetric relaxation time and a lower systolic function with a lower ejection fraction (figure 1). Left-ventricular end diastolic and systolic diameters were higher in ax-SpA patients with respectively mean difference 0.55 mm [CI95%; 0.19, 0.91] and 0.79 mm [CI95%; 0.40, 1.17]. We did not find any difference for left and posterior ventricular thickness, left atrial dimension, and left ventricular mass index.

Figure 1. Systolic and diastolic dysfunction is slightly altered in ax-SpA patients compared to healthy individuals. Diastolic dysfunction was assessed by (A) E/A ratio (m/s), (B) deceleration time (ms), (C) Isovolumetric relaxation time (ms) and (D) systolic function was assessed by ejection fraction (%).

A total of 15 articles reported prevalence of valvulopathy in ax-SpA. Prevalence of mitral regurgitation and aortic regurgitation were similar in ax-SpA patients and healthy individuals: OR=1.13 [CI95% 0.76, 1.68] and OR=1.18 [CI95% 0.68, 2.04].

Conclusion: Prevalence of valvulopathy was similar in ax-SpA and healthy individuals. Diastolic and systolic function seems to be slightly altered in ax-SpA compared to healthy controls. However, this difference is unlikely clinically relevant. Usefulness of systematic echocardiography remains to be determined in future longitudinal studies.

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AB0666

A COMPARISON OF CLINICAL FEATURES AND PREDICTORS OF TREATMENT RESPONSE IN SPONDYLOARTHRITIS PATIENTS IN THE MIDDLE EAST: A CROSS-SECTIONAL MULTINATIONAL STUDY

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Background: Spondylarthritis is a chronic inflammatory disease with heterogeneous clinical features. Its prevalence ranges between 0.2%-2%. Over the years biological therapy has improved work productivity and activity impairment in people with SpA. Unlike in rheumatoid arthritis, the concept of treat-to-target is still

debatable among rheumatologist. However, there is a consensus that treatment in patient with SpA should be personalized. There are several challenges in the Middle East that might affect providing personalized medicine to patients with SpA in this region.

Objectives: The objective of the study is to explore factors that interfere with achieving clinical targets in patients with SpA clinical practice in the Middle East.

Methods: We conducted a cross-sectional, multicentre study to explore the factors that interfere with achieving clinical targets in SpA patients from four countries in the Middle East (Lebanon, Oman, Qatar, and the United Arab Emirates). A total of 404 patients who attended participating centers from January 2019 to June 2019 and who met the ASAS 2010 classification criteria for axial and peripheral SpA; and were at least 18 years of age were enrolled in the study. We excluded patients with peripheral arthritis only. We extracted demographics, clinical data, and conducted patients survey. We used Compliance Questionnaire for Rheumatology (CQR) is a self-reported adherence measure created specifically for and validated in rheumatic diseases.

Demographic data and disease and treatment characteristics were described as median and the 25th–75th interquartile range (IQR). Multiple regression analysis was used to investigate the impact of different factors on ASDAS-CRP in patients with SpA. Statistical analysis was performed using Minitab version 18.1 software.

Results: A total of 404 patients initially enrolled in the study, we excluded 95 patients as they had peripheral involvement only. We analysed the data of 309 patients with axial only or axial and peripheral SpA. There median age was 43 years and 53.7% were females. The median disease duration was six years. At the time of the study, 72.1% patients were within the arbitrary clinical target of ASDAS < 2.1. Detail description of the studied population and subgroups outlined in table 1. Enthesitis (OR: 2.9; P value: 0.004), Psoriasis (OR: 2.74; P value: 0.007), low compliance score (OR: -4.36; P value: < 0.0001) and HLA B27 (OR: 2.12; P value: < 0.04) were independent predictors of a higher ASDAS –CRP.

Conclusion: Enthesitis, psoriasis, noncompliance, and HLA B27 were independent predictors for ASDAS in our cohort.

Table 1. Demographic and clinical characteristics of all patients and for achiever and non-achievers

Variables	All patients (309)	Achiever (223)	Non-achievers (86)
Age, Median, (IQR) yrs	43, (36-51)	43, (35-51.5)	42, (37-51)
Female %	53.7%	54.2%	51.9%
Disease Duration, Median, (IQR) yrs	6, (3-9)	6, (2-8)	7.5, (3-10)
Patient has medical insurance/ Medical coverage	94.5%	95.0%	93.1%
Smoking	13.9%	12.1%	18.6%
ASDAS-CRP, Median (IQR)	1.56, (1.24-2.1)	1.56, (1.07-1.6)	2.75, (2.36-3.3)
Arthritis	40.1%	36.3%	48.1%
Dactylitis	13.6%	11.3%	18.50%
Enthesitis	29.1%	22.4%	43.2%
Family history of SPA	18.4%	14.3%	25.9%
Good response to NSAIDs	21.7%	18.8%	22.2%
HLA B27	30.0%	25.6%	40.0%
Inflammatory bowel disease	7.1%	7.3%	6.20%
Inflammatory low back pain	68.6%	68.1%	69.8%
Onycholysis	10.9%	10.7%	11.1%
Psoriasis	39.4%	25.1%	40.7%
Sacroiliitis (Radiographic)	50.4%	49.8%	51.9%
Uveitis	6.1%	4.0%	11.1%
SpA- classification			
Axial	49.8%	55.7%	35.6%
Axial & peripheral	50.2%	44.3%	64.4%

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AB0667

ACHILLES PAIN PERSISTENCE IN PATIENTS AFFECTED BY SPONDYLOARTHRITIS: ULTRASONOGRAPHIC AND BIOMECHANICAL STUDY.

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