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AB0653

SURVIVAL OF BIOLOGIC THERAPY AS SECOND LINE IN PATIENTS WITH ANKYLOSING SPONDYLITIS. EXPERIENCE IN A TERTIARY CARE CENTRE

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Background: In ankylosing spondylitis (AS) patients with lack of response to a first line of biologic disease modifying antirheumatic drugs (bDMARD), switching to another bDMARD is recommended, aiming either to the same or different therapeutic target. In several previous studies a decrease in drug survival has been noted when tumor necrosis factor alpha inhibitors (TNFi) are used as second or third treatment line (1,2).

Objectives: Primary endpoint: To evaluate survival of bDMARD as second line treatment in patients with AS non responding to TNFi either because of lack or loss of efficacy. Secondary: To evaluate the impact on drug survival of several variables such as sex, HLA, peripheral arthritis, radiologic sacroiliitis, CRP, BASFI, BASDAI or bDMARD class.

Methods: Observational, longitudinal and retrospective observational study. We included 67 patients diagnosed with AS who received treatment on second line with bDMARD (TNFi or anti IL7) after discontinuation of TNFi as first line of treatment. We analyze patients older than 18 yo, with at least 3 months of continuous treatment before and after switch, seen in our Hospital from 2006 to 2019. Data were collected regarding to demographics, HLA B27 positivity and functionality and activity index, CRP and treatment with cDMARDs.

Results: All 67 patients included were still on follow up after switching to second bDMARD. Median age was 37 yo, 56.7% were male and 31%, smokers. 35.8% patients had axial AS; 1.5% peripheral arthritis; 62.7%, mixed and 9%, dactylitis. 76.1% had radiographic sacroiliitis and 74.6%, HLA B 27+. As first bDMARD, the most common was Infliximab (IFX) (47.8%), followed by Adalimumab (ADA) (19.4%) and Etanercept (ETN 14.9%). Mean survival was 32.4 months (IFX, 37 months; ETN, 45; Golimumab, 32.3 and ADA, 24.1). The commonest cause of treatment suspension was loss of efficacy (LoE) (56.7%), followed by lack of efficacy (LaE) (17.6%) and adverse effects (AE) (16.4%).

As second bDMARD the most frequent was ADA (35.8%), followed by ETN (34.3%), Golimumab (9%), IFX (7.5%) and Secukinumab (6%) with a mean survival of 45 months (ETN 63.8, ADA 45.7, Golimumab 32). Treatment was discontinued in 47.8% of patients because of LoE (17.9%), LaE (17.9%) and EA (11.9%). A total of 16 AE were recorded, of which 6% were infections and 9%, allergic reactions. Regarding the analysis of the impact of other variables on drug survival, there was statistically significant differences on HLA B 27 carrier status ($p=0.012$), in which we observed an increase on survival when the patient is HLA B27 + and in whom BASDAI is higher before switching ($p=0.02$).

Conclusion: In our study, we did not observe differences in survival of second line bDMARD in patients with AS regarding type of TNFi, case of discontinuation or type of radiographic involvement in the first line of treatment. Patients with HLA B27+ and high value of BASDAI at the beginning of second bDMARD showed an increased on drug survival. Contrary to literature, we did not see significant differences regarding CRP.

References:

- [1] Gíltborg B, Østergaard M, Krogh NS, Tarp U, Manilo N, Loft AGR, et al. Clinical response, drug survival and predictors thereof in 432 ankylosing spondylitis patients after switching tumour necrosis factor α inhibitor therapy: results from the Danish nationwide DANBIO registry. *Ann Rheum Dis*. 2013 Jul;72(7):1149–55.
- [2] Deodhar A, Yu D. Switching tumor necrosis factor inhibitors in the treatment of axial spondyloarthritis. *Semin Arthritis Rheum*. 2017 Dec;47(3):343–50.

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AB0654

IMPACT OF GENDER ON PATIENT PROFILE AND TREATMENT RESPONSE IN ANKYLOSING SPONDYLITIS PATIENTS TREATED WITH TNF- α INHIBITORS

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Background: Ankylosing spondylitis (AS) was historically seen as a predominantly male disease and although recent data showed a more homogenous sex prevalence there is still a long delay and more often a misdiagnosis in women. Also, studies showed that there might be gender-attributable differences regarding clinical characteristics, radiographic damage and response to treatment.

Objectives: The aim of this study was to assess gender differences in AS patients regarding the clinical presentation, disease activity, functional status and response to tumor necrosis factor-alpha inhibitor (TNF- α inhibitor) therapy.

Methods: This retrospective analysis included 59 AS patients treated with first TNF- α inhibitor for at least 12 weeks. TNF- α inhibitor therapy introduction and response was determined according to ASAS-EULAR management recommendations for AS. Clinical and demographic parameters were compared between the female and male patients.

Results: Twenty-four patients (40,68%) were females and 35(59,32%) were males. Women were older than male at moment of study ($p=0,049$), at the time of diagnosis ($p=0,05$) and when starting biologic therapy ($p=0,009$). Moreover, they had a longer diagnosis delay ($p=0,017$) compared to men. Prevalence of HLA-B27 status and the rate of peripheral arthritis, dactylitis, enthesitis, uveitis or inflammatory bowel disease (IBD) were not different between two groups. Disease activity and functional status were also similar in both groups. Males had a significantly longer drug survival time for first biologic ($p=0,031$). One female patient (4.2%) and 4 male patients (11,4%) showed primary or secondary inefficacy to TNF- α inhibitor ($p=0,61$). All 5 non-responders switched to second TNF- α inhibitor and showed a good clinical response. The comparison of the demographic features, clinical characteristics, disease activity, functional status and response to TNF- α inhibitor therapy according to the gender are presented in Table 1.

Conclusion: In our cohort, the presence of the female gender was related to longer diagnosis delay compared to males. Non-response rate for the first TNF- α inhibitor was similar between groups, but men had longer drug survival time for the first biologic.

References:

- [1] Rusman T, van Vollenhoven RF, van der Horst-Bruinsma IE. Gender differences in axial spondyloarthritis: women are not so lucky. *Curr. Rheumatol. Rep*. 20(6), 35 (2018).
- [2] Van der Heijde D, Ramiro S, Landewe R, et al. (2017): 2016 update of the ASAS-EULAR management recommendations for axial spondyloarthritis. *Ann Rheum Dis*.76:978–91.

Table 1. Comparison of the baseline demographic, clinical characteristics and treatment response between female and male patients treated with TNF- α inhibitor

	female (n=24)	male (n=35)	P Value
Age (years), mean $\pm$ SD	49,08 $\pm$ 12,94	42,56 $\pm$ 11,96	0,049
Age at onset (years), mean $\pm$ SD	31,6 $\pm$ 9,5	27,7 $\pm$ 9,18	0,117
Age at diagnosis (years), mean $\pm$ SD	39,02 $\pm$ 11,22	33,06 $\pm$ 11,36	0,05
Diagnosis delay (years), mean $\pm$ SD	7,39 $\pm$ 3,45	5,36 $\pm$ 2,86	0,017
Age at TNF- α inhibitor initiation (years), mean $\pm$ SD	46,4 $\pm$ 12,25	38,08 $\pm$ 11,14	0,009
HLA-B27 positivity n (%)	17 (70,8%)	32 (91,4%)	0,086
Family history n (%)	10 (41,7%)	15 (42,9%)	1
Peripheral arthritis n (%)	16 (66,7%)	17 (48,6%)	0,26
Enthesitis n (%)	3 (12,5%)	6 (17,1%)	0,9
Dactylitis n (%)	0 (0%)	3 (8,6%)	0,385
Uveitis n (%)	8 (33,3%)	9 (25,7%)	0,732
Inflammatory bowel disease n (%)	3 (12,5%)	5 (14,3%)	1
BASDAI score at TNF- α inhibitor initiation, mean $\pm$ SD	6,33 $\pm$ 1,69	6,11 $\pm$ 1,77	0,637
BASFI score at TNF- α inhibitor initiation, mean $\pm$ SD	5,68 $\pm$ 1,39	6,09 $\pm$ 1,39	0,272
ASDAS-CRP score at TNF- α inhibitor initiation, mean $\pm$ SD	3,87 $\pm$ 0,93	3,78 $\pm$ 1,02	0,743
Duration of first TNF- α inhibitor use (months), mean $\pm$ SD	35,33 $\pm$ 26,66	51,54 $\pm$ 28,25	0,031
Non-responders to first TNF- α inhibitor n (%)	1 (4,2%)	4 (11,4%)	0,611

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AB0655

IMPACT OF BIOLOGIC THERAPY ON WORK IMPAIRMENT IN REAL LIFE IN AXIAL SPONDYLOARTHRITIS PATIENTS: DATA FROM REGISPONSERBIO

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