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THU0408

ACHIEVING DISEASE REMISSION IN AXIAL SPONDYLOARTHRITIS: A TWO-CENTRE RETROSPECTIVE ANALYSIS OF RELEVANT BASELINE PATIENT CHARACTERISTICS

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Background: ASAS-EULAR Axial Spondyloarthritis (AxSpA) guidelines recommend that AxSpA treatment should be guided according to a pre-defined target¹, following increasing evidence that persistent, uncontrolled inflammatory disease activity results in long-term damage and poor outcomes^{2,3}. Despite this, there remains no single definition for "remission" in AxSpA.

Objectives: To identify baseline characteristics of individuals achieving AxSpA disease "remission" 6 months after initiation of biologic disease-modifying therapy (bDMARD).

Methods: A two-centre retrospective cross-sectional analysis was performed, of AxSpA patients receiving their first bDMARD at the Royal National Hospital for Rheumatic Diseases, Bath, and Norfolk and Norwich University Hospital, Norwich. AxSpA "remission" was defined as Bath Ankylosing Spondylitis Disease Activity Index (BASDAI) <1; Bath Ankylosing Spondylitis Functional Index (BASFI) <3.8 or serum C-reactive protein (CRP) <5. A non-parametric (2-tailed Chi-Square) test was applied to identify differences in baseline characteristics which distinguished those patients achieving "remission" after 6 months bDMARD treatment from others.

Results: 538 patients were included. Sufficient BASDAI data was available for 440, CRP data for 448 and BASFI data for 354. Overall, 42 (9.5%) patients achieved BASDAI <1; 275 (61.4%) achieved CRP <5 and 206 (58.2%) achieved BASFI <3.8. The differences in baseline characteristics of individuals achieving these AxSpA "remission" outcomes compared with others are summarised in Table 1, with statistically significant results at the 95% level highlighted.

Abstract THU0408 – Table 1. p-values of 2-tailed non-parametric test comparing baseline characteristics of individuals achieving AxSpA "remission" outcomes after 6 months versus others.

Baseline characteristics	p-values		
	BASDAI <1 N=42/440	CRP <5 N=275/448	BASFI <3.8 N=206/354
Lower mean age at axSpA diagnosis	0.04	0.78	0.09
Less mean time from diagnosis to bDMARD initiation	0.56	0.00	0.66
Lower median baseline BASDAI	0.35	0.39	0.00
Lower median baseline CRP	0.01	0.00	0.67
Lower median baseline BASFI	0.08	0.04	0.00
Lower median baseline BASMI	0.73	0.44	0.00
HLA B27+	0.21	0.06	0.10
Male sex	0.87	0.52	0.62

Conclusion: Our self-defined measures of BASDAI and CRP remission were most achievable in our cohort for patients with lower CRP and less functional limitation before bDMARD initiation. This may reflect remission being more achievable when treating milder disease. Functional "remission" was influenced by baseline BASMI and BASDAI in our cohort, highlighting the importance of both disease activity and pre-existing structural damage on functional outcomes. Further work could include longitudinal follow-up of outcomes in these patients to establish the relevance of targeting AxSpA remission. "BASDAI remission" was very narrowly defined in this study, and this analysis could be repeated with a more achievable target eg BASDAI <3.

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THU0409

PATTERN AND INFLUENTIAL FACTORS IN PROMOTING TREAT-TO-TARGET (T2T) FOR FOLLOW-UP ANKYLOSING SPONDYLITIS (AS) PATIENTS WITH A RHEUMATOLOGIST-PATIENT INTERACTIVE SMART SYSTEM OF DISEASE MANAGEMENT (SSDM): A COHORT STUDY FROM CHINA

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Background: Ankylosing Spondylitis Disease Activity Score (ASDAS) is adopted to evaluate the degree of disease activity and the inflammatory response in AS patients. ASDAS score ≤ 1.3 represents inactive disease status and achievement of T2T.

Objectives: To evaluate the patterns of T2T and related influential factors among AS patients after applying SSDM in the real world.

Methods: SSDM is a mobile application for disease management. Patients were trained to master SSDM by healthcare professionals and to conduct ASDAS self-assessments. Patients were also required for repeating self-evaluation after leaving the hospital. After entry by patients, data can be synchronized to the SSDM terminal of authorized rheumatologists.

Results: From Jan 2015 to Jan 2019, 667 AS patients across China were followed up for more than 6 months through SSDM. The results at baseline and in final follow up were summarized in Table 1. The rate of T2T achievers were 28.49% (190/667) at baseline, and improved significantly to 41.38% (276/667) after 6 months follow up, p<0.01. Among T2T achievers at baseline, 64.21% (122/190) maintained T2T, 35.79% (68/190) relapsed. Of patients who didn't achieve T2T at baseline, only 32.29% (154/477) of the other AS patients achieved T2T after 6 months follow up. We further analyzed the impact of the times of self-assessment for ASDAS on T2T. The patients were stratified according to their frequency of self-assessment: more than 3 times, less than or equal to 3 times self-assessments within 6 months follow-up. Results show that the more frequent of the self-assessment, the higher improvement of T2T rate (19.34% vs. 8.40%, Table 2). A linear regression analysis of variables in statistics and parameter estimation was conducted by least square method. The improvement of T2T rate(y) was positively correlated with times of self-assessment for ASDAS(x) independently (Figure 1).

Conclusion: Significant improvement was observed under applying SSDM through empowering AS patients. After proactive disease management via SSDM for more than 6 months, Patients with ASDAS≤1.3 score at baseline had a significantly higher retention rate of disease activity. The patients who performed more self-assessments through SSDM had lower probability of relapse and higher rate of T2T. SSDM is a valuable tool for long term follow-up through empowering patients.