POS0671

VALIDATION OF TWO RESPONSE AND ONE STATUS MEASURES OF THE ASAS HEALTH INDEX VERSUS EXTERNAL ANCHORS IN PATIENTS WITH AXIAL SPONDYLOARTHRITIS

Keywords: Validation, Outcome measures

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Background: Improvement in functioning and health as assessed by the ASAS Health Index (HI) is an important outcome of interventions in patients with axial spondyloarthritis (axSpA). The ability of various ASAS HI thresholds to discriminate between treatment arms of an active comparator trial have been demonstrated recently by our group with absolute improvement in the ASAS HI in general being superior to relative changes [1, 2].

Objectives: To assess whether ASAS HI response measures (absolute improvement of ≥3.0 and relative improvement of ≥30%) and reaching a status of good global functioning (ASAS HI ≤5.0) adequately discriminate between the changes and states in relevant external outcomes.

Methods: In this post-hoc analysis from the tight-controlled, treat-to-target (T2T) trial TICOSPA (2), data of active axSpA patients randomized to either the T2T arm (visits every 4 weeks, prespecified strategy of treatment intensification until achieving low disease activity) or usual care (UC; visits every 12 weeks, treatment at the rheumatologist's discretion) were used. The performance of ASAS HI response- and status scores against change (ASAS-40/ BASDAI-50 response, change in patient global/ BASDAI, and ASDAS improvement) and external status scores (ASAS partial remission, ASDAS status) was assessed, respectively. Analysis were performed by comparing the mean values and proportion of responses of continuous and dichotomous response outcomes, by t-tests. Missing data on outcomes was handled by non-responder imputation (NRI).

Results: ASAS HI was available in 160 patients, both at baseline and at week 48. At w48, an ASAS HI improvement of ≥30%, improvement of ≥3 points and ASAS HI ≤5.0 was achieved by 56 (35%), 51 (31.9%) and 54 (33.7%) patients, respectively. Patients with a meaningful improvement in global functioning had a larger reduction in patient global and disease activity as well a greater chance to reach remission compared to patients with no significant improvement in global functioning (Table 1). Health outcomes were not different between the two response measures of ASAS HI. Patients who achieved ASAS partial remission, ASDAS inactive disease or ASDAS low activity at week 48 were more likely to have an ASAS HI ≤ 5.0 compared with patients who did not achieve such states (Figure 1).

Conclusion: We demonstrated discriminant capacity of both, the relative and the absolute response measures of the ASAS HI. Both thresholds proved to have external validity and were able to discriminate between active treatment arms.

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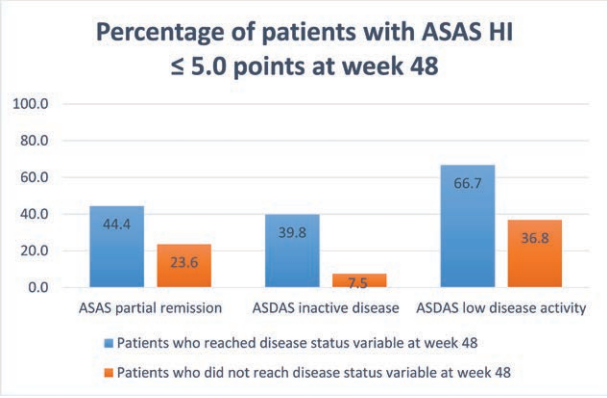

Figure 1. Proportion of patients reaching status of good global functioning at week 48

Table 1. Comparison of clinical outcomes and ASAS HI response at follow up

		ASAS HI response = > 30% improvement (NRI)			ASAS HI response = > 3 points improvement (NRI)		
		Yes (n=56)	No (n=104)	*p*	YES (n=51)	No (n=109)	*p*
ASAS40 response at w48		**48.2%**	**21.2%**	**<0.001**	**51.0%**	**(21.1%**	**<0.001**
BASDAI 50 at w48		**71.4%**	**28.8%**	**<0.001**	**68.6%**	**32.1%**	**<0.001**
ASDAS Major improvement (0 to 48w)		**23.2%**	**6.7%**	**0.005**	23.5%	7.3%	0.008
ASDAS Clinically Important Improvement (0 to 48w)		**62.5%**	**24.0%**	**<0.001**	**60.8%**	**26.6%**	**<0.001**
Change in Patient Global (0 to 48w)	Mean (SD)	**-3.54 (2.77)**	**-1.81 (2.61)**	**<0.001**	**-3.73 (2.85)**	**-1.80 (2.53)**	**<0.001**
	Median	**-4.00**	**-1.00 [-8.00.**		**-4.00**	**-1.00 [-8.00.**	
	[Min. Max]	**[-10.0. 6.00]**	**3.00]**		**[-10.0. 6.00]**	**3.00]**	
	Missing	**0 (0%)**	**18 (17.3%)**		**0 (0%)**	**18 (16.5%)**	
Change in BASDAI (0 to 48w)	Mean (SD)	**-2.79 (2.09)**	**-1.42 (2.04)**	**<0.001**	**-2.95 (2.17)**	**-1.40 (1.96)**	**<0.001**
	Median	**-2.60**	**-1.25 [-8.60.**		**-3.00**	**-1.20 [-8.60.**	
	[Min. Max]	**[-8.90. 1.40]**	**3.00]**		**[-8.90. 1.40]**	**3.00]**	
	Missing	**0 (0%)**	**18 (17.3%)**		**0 (0%)**	**18 (16.5%)**	

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POS0672

RHEUMATOLOGISTS OVERCALL SACROILIITIS ON X-RAY AND MRI IN AXIAL SPONDYLOARTHRITIS PATIENTS: DATA FROM THE BELGIAN INFLAMMATORY ARTHRITIS AND SPONDYLITIS COHORT (BE-GIANT)

Keywords: Imaging

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Background: Imaging of the sacroiliac joints, especially with magnetic resonance imaging (MRI), is an important tool for early diagnosis of axial spondyloarthritis (axSpA). Interpretation of sacroiliac joint imaging can vary according to readers' experience, but it is currently unknown if and how imaging assessment differs between academic hospitals and community based rheumatological care.

Objectives: To investigate (1) agreement between local and central reading of sacroiliac joint images (X-ray and MRI) from axSpA patients, and (2) to explore potential differences between patients diagnosed in an academic hospital compared to community centres.

Methods: The BelGian Inflammatory Arthritis and spoNdylitis cohort (Be-GIANT) includes newly diagnosed biological-naïve axSpA patients, that fulfil the ASAS classification criteria, at the outpatient clinic of an academic hospital and eight community centres in Flanders. X-ray and MRI of the sacroiliac joints (SIJ) of patients enrolled between November 2010 and August 2020 were assessed by the local rheumatologist ('local reading') and two calibrated central readers ('central reading') for definite radiographic sacroiliitis according to the modified New York criteria (X-SIJ) and active sacroiliitis according to the ASAS/OMERACT definition of a positive MRI (MRI-SIJ). Central readers resolved discrepant cases by consensus. Inter-reader reliability was assessed with Cohen's Kappa, and % overall, positive and negative agreement.

Results: Among the 271 included patients (n=205 academic hospital, n=66 community hospital), 231 X-SIJ and 208 MRI-SIJ were available for central reading (Table 1). Central readers disagreed with local readers on 30/231 (13%) X-SIJ images (κ=0.44, moderate); 4/231 (1.7%) were reclassified as radiographic sacroiliitis and 26/231 (11.3%) as not showing radiographic sacroiliitis. Overall agreement was higher between central readers and academic rheumatologists