instrument for ophthalmologists [1]. At the same time, the ASAS referral tool [2] can also be used on the level of ophthalmologists.

Objectives: The objective of the study was to compare the performance of the DUET and the ASAS referral tools for recognition of SpA in patients with acute anterior uveitis.

Methods: A total of 100 consecutive patients with acute anterior uveitis of an ophthalmology clinic were included, 87 had completed a standardized rheumatological examination (including MRI of sacroiliac joints) allowing for a definite conclusion on the presence/absence of SpA. The sensitivity, the specificity and the positive predictive value of both referral tools were calculated.

Results: Out of the 87 patients with acute anterior uveitis 54 (62%) were diagnosed with SpA (51 with axSpA, one with peripheral SpA, one with reactive arthritis and one with psoriatic arthritis), in 36 cases the diagnosis was made for the first time. The performance of both referral tools is presented in table. The ASAS referral tool showed higher sensitivity (that was especially evident in the previously undiagnosed population) but somehow lower specificity compared to the DUET. The positive predictive value was comparable for both tools indicating that approximately 2 patients with uveitis should be referred in order to diagnose one case of SpA.

In our study, MRI scans were performed on all patients including those without back pain. We thereby diagnosed axial spondyloarthritis in 5 patients, even though they did not fulfill the ASAS classification criteria as they never reported back pain (1 patients) or their back pain did not start prior to the age of 45 years (4 patients).

Table. Test performance of two referral tools in all patients and only patients without a diagnosed spondyloarthritis (SpA): Dublin Uveitis Evaluation Tool (DUET) versus an adaptation of the Assessment of SpondyloArthritis International Society referral tool (ASAS).

	ASAS, n/N (%)	DUET, n/N (%)	ASAS, patients without a known diagnosis of SpA, n/N (%)	DUET, patients without a known diagnosis of SpA, n/N (%)
Sensitivity	48/54 (88.9%)	45/54 (83.3%)	31/35(86.1%)	27/35(75.0%)
Specificity	8/33 (24.2%)	13/33 (39.4%)	8/31(25.8%)	12/32(41.9%)
Positive predictive value	48/73 (65.8%)	45/65 (69.2%)	31/54(57.4%)	27/45(60.0%)

Figure. DUET and ASAS referral tool, modified after [1,2].

Conclusion: We revealed a high prevalence of undiagnosed SpA in patients with acute anterior uveitis. As anticipated, the more complex DUET including also psoriasis and HLA-B27 positivity showed higher specificity for recognition than the ASAS referral tool. However, the ASAS tool has a higher sensitivity (especially in undiagnosed population) and a better feasibility (purely clinical tool, does not include HLA-B27 testing and evaluation of psoriasis by an ophthalmologist).

REFERENCES

- [1] Haroon M, et al. *Ann Rheum Dis* 2015;74:1990-5.
- [2] Poddubnyy D, et al. *Ann Rheum Dis* 2015;74:1483-7.

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SAT0347

COMORBID CONDITIONS ARE ASSOCIATED WITH HIGHER DISEASE ACTIVITY AND WORSE FUNCTIONAL STATUS IN AXIAL SPONDYLOARTHRITIS: A POPULATION-BASED ANALYSIS OF INSURANCE CLAIMS LINKED TO PATIENT SURVEY DATA

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Background: Data on the prevalence of comorbidities and their association with disease activity and functional status in axial spondyloarthritis (axSpA) are scarce.

Objectives: The aim of this study was to investigate the prevalence of comorbid conditions and to analyse their association with disease activity and functional status in a population-based cohort of patients with axSpA.

Methods: A stratified random sample of subjects with a diagnosis of axSpA (ICD-10 M45) was drawn from health insurance data in Germany and received a questionnaire on disease-related, demographic and socioeconomic parameters. A sex- and age-matched control cohort without axSpA was drawn from the claims data. Information on comorbidities, drug prescriptions and non-pharmacological treatment was retrieved from claims data and linked to the questionnaire data for axSpA. Multivariable linear regression models were used to determine the association of comorbidities (defined by Elixhauser coding algorithms excluding rheumatic diseases) with disease activity and functional status.

Results: A total of 1,776 patients with axSpA were included in the analyses; mean age was 56.1 years and 46.4% were female. The most prevalent comorbid conditions were hypertension (50.9%), depression (25.5%), and chronic pulmonary disease (23.4%) (Figure 1). The prevalence of the majority of comorbidities was higher in axSpA as compared to controls. In the multivariable linear regression analyses, the number of comorbidities was significantly associated with both BASDAI and BASFI: each comorbidity was associated with BASDAI increase by 0.12 and BASFI increase by 0.10 points independently of other factors including treatment (Table 1).

Table 1. Impact of comorbidity on disease activity (BASDAI) and functional impairment (BASFI) in patients with axial spondyloarthritis (N=1,776): Results from multivariable linear regression models.

Reference	BASDAI β (95% CI)	BASFI β (95% CI)
Elixhauser Index*	per unit 0.12 (0.07, 0.17)	0.10 (0.04, 0.17)
Number of pharmaceuticals**	per unit -	0.03 (0.01, 0.06)
Age	per 10 years 0.11 (0.04, 0.19)	0.51 (0.42, 0.60)
Sex, female	male 0.55 (0.37, 0.73)	-0.02 (-0.24, 0.21)
Uveitis, present	not present -0.42 (-0.74, -0.09)	-
In rheumatological care	no 0.29 (0.09, 0.50)	0.60 (0.37, 0.82)
Body mass index, kg/m ²	per unit 0.02 (0.00, 0.04)	0.07 (0.05, 0.10)
Lack of exercise	no -	0.62 (0.37, 0.88)
Smoking (current)	no 0.28 (0.05, 0.52)	0.54 (0.28, 0.80)
Suffering from stress	no 0.76 (0.57, 0.95)	0.23 (0.01, 0.46)
NSAIDs	no 0.43 (0.24, 0.62)	-
bDMARDs	no -0.37 (-0.63, -0.11)	-
Non-opioid analgesics	no 0.34 (0.12, 0.56)	0.43 (0.15, 0.71)
Opioids	no 1.02 (0.76, 1.27)	1.64 (1.32, 1.97)
Steroids	no 0.26 (0.02, 0.49)	-
Physical therapy	no 0.31 (0.13, 0.50)	0.37 (0.15, 0.59)

*excluding rheumatic diseases; **except axSpA-related medication.

BASDAI, Bath Ankylosing Spondylitis Disease Activity Index; BASFI, Bath Ankylosing Spondylitis Functional Index; bDMARDs, biological disease-modifying anti-rheumatic drugs; NSAIDs, non-steroidal anti-inflammatory drugs.

Figure 1 Comorbidities defined by Elixhauser coding algorithms* in patients with axial spondyloarthritis (N=1,776) and matched controls (N=1,776).

*excluding rheumatic diseases. AxSpA, axial spondyloarthritis; COPD, chronic pulmonary disease.

Conclusion: Comorbid conditions are common in axSpA patients and are independently associated with higher disease activity and higher level of functional impairment. Higher disease activity and a higher level of functional disability might be indicators of a severe disease resulting in the development of comorbid conditions.

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SAT0348 HOW FREQUENT IS NEUROPATHIC PAIN COMPONENT IN PATIENTS WITH SPONDYLOARTHRITIS?

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Background: Criteria to define inflammatory back pain in Spondyloarthritis (SA) are multiple. Although neuropathic pain component was known to be part of disease symptoms, it has been rarely assessed.

Objectives: The aim of this study was to determine the prevalence of the neuropathic pain component in SA patients and secondarily, to detect correlation with the disease duration, activity scores and functional impairment.

Methods: A cross-sectional study including patients with radiographic axial SA defined by ASAS criteria was conducted. Patients were questioned about their neuropathic pain using painDETECT questionnaire and Douleur Neuropathique en 4 Questions (DN4) interview. Further information about disease characteristics, activity (BASDAI, ASDAS_{CRP}) and functional (BASFI) scores were assessed the same day.

Statistical analysis, was performed by Chi²-test for qualitative variables and Student-test for quantitative variables. A p value ≤0.05 was considered significant.

Results: Forty patients were included. The average age was about 41 years old (±12.9) and the sex ratio was 12.3 (H/F). The mean disease duration was 10.7±6.9 years. Most of patients suffered from back pain and the visual analogic scale pain scale was about 3.78±2.5. The mean BASDAI score was 2.75±2.3 and the mean ASDAS_{CRP} was 2.24±1.07. The average BASFI score was 2.57±2.5. Neuropathic pain component was noted only in 7.5% of patients by DN4 interview (≥4/10) and in 10% of patients by pain DETECT questionnaire.

As expected, patients with DN4≥4 were correlated to the visual analogic scale pain (p=0.04) and female gender (p=0.07). But no relation was found with the type of SA or the disease activity or the functional scores.

Conclusion: Neuropathic pain component was noted only in 10% of SA in our work. Positive correlation was found with visual analogic scale pain and female gender. Larger studies are needed to assess this type of pain since therapeutic strategy may be affected.

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SAT0349 HIGHER DISEASE ACTIVITY IS ASSOCIATED WITH MORE SPINAL RADIOGRAPHIC PROGRESSION IN PATIENTS WITH AXIAL SPONDYLOARTHRITIS

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Background: The association between disease activity and spinal radiographic progression in radiographic axial spondyloarthritis (r-axSpA) has been previously shown in a cohort of patients (pts) not being treated with TNF inhibitors (TNFi).¹

Objectives: To test the possible association between disease activity and spinal radiographic progression in r-axSpA in a real-life cohort, also including patients treated with TNFi.

Methods: Pts with axial spondyloarthritis (axSpA) fulfilling the modified New York criteria (mNY) were included in this prospective, observational cohort (ALBERTA FORCAST). Clinical and imaging data were collected at baseline and every 2 years up to 10 years of follow-up. Radiographs of the spine were independently scored by 2 central readers and one adjudicator (if disagreement), with known chronological order but blinded to clinical data, using the modified Stoke Ankylosing Spondylitis Spine Score (mSASSS). To be included, pts had to have ≥ one 2-year interval with data on mSASSS from ≥1 reader available as well as complete data on ASDAS and TNFi exposure at the start of the interval. The association between ASDAS at the start of the interval (t) and mSASSS 2 years later (t+1) was tested in two types of longitudinal GEE models: i. multilevel (2 readers) model with the individual reader scores as outcome (2-level models); ii. Using as outcome averaged scores between readers (1-level models). Both type of models were adjusted for mSASSS at t (autoregression) and for a set of potential confounders defined a priori on clinical grounds (Figure).

Results: In total, 314 pts (442 intervals) were included [74% males, mean symptom duration 17.8 (SD 11.7) years, 83% HLA-B27 positive and 7% previously treated with ≥1 TNFi]. At baseline the mean ASDAS was 2.7 (1.3) and the mean mSASSS 13.8 (18.9). During follow-up 213 (68%) pts received treatment with TNFi in ≥1 visit. Overall, the average 2-year progression was 1.33 (2.68) mSASSS-units per 2-year interval. In the 2-level multivariable model, 1 ASDAS-unit increase at t was associated with an increase of 0.25 mSASSS-units at t+1 [β (95% CI): 0.25 (95%CI 0.10; 0.41)] (Figure). Results were similar using the averaged mSASSS as the outcome [β (95% CI): 0.25 (0.08; 0.43)].

Conclusion: These data add to previous evidence by showing that a higher ASDAS is associated with higher spinal radiographic progression in pts with r-axSpA independent of prior treatment with TNFi.

REFERENCE

- [1] Ramiro S, et al. Ann Rheum Dis 2014;73:1455–61.

Figure. Longitudinal effect of ASDAS at the start of the interval on mSASSS 2 years later in a multilevel, multivariable linear GEE model with autoregression (N=313; model also adjusted for mSASSS at t-1 ('autoregressor'), Number of TNFi before baseline (continuous) and TNFi at t-1 (yes vs no)).

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