include in the final questionnaire (named IBIS-Q; Table 1) having a sensitivity 84.4% and specificity 80% to detect SpA (AUC 0.8803 with CI 95% 0.8305- 0.9301). We propose as cut-off of 4 positive questions of the IBIS-Q for SpA patient identification

Conclusion: IBIS-Q seems to be a useful and simple tool to use in our IBD clinic for the detection of SpA, with a good statistical performance. Further studies are needed to validate this questionnaire

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SAT0352 THE FREQUENCY OF OCULAR MANIFESTATIONS IN PATIENTS WITH ADULT VS. CHILDHOOD SPONDYLOARTHRITIS

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Background: Adult spondyloarthritis (SpA) is characterized by abnormal bone overgrowth and inflammatory erosive osteopenia in the spine. SpA may be associated with psoriasis and psoriatic arthritis (PsA), inflammatory bowel disease, reactive arthritis, enthesitis, and ocular features such as acute anterior iritis, and chronic uveitis. Juvenile SpA onsets in children under 16 years old and may present with more peripheral enthesopathies and arthritis than adult SpA.

Objectives: This meta-analysis investigated the frequency and type of ocular involvement in childhood and adult SpA. The difference in frequency between childhood and adult SpA was also investigated.

Methods: Medline, Web of Science and Cochrane databases were searched to September, 2018 to identify publications related to spondyloarthropathy (SpA), and ankylosing spondylitis (AS) with ocular conditions (OC) (conjunctivitis, keratoconjunctivitis sicca, xerophthalmia, uveitis, eye hemorrhage, optic neuritis, papilledema, orbital disease, retinal artery/vein occlusion, macular edema, retinitis, chorioretinitis, scleritis, iridocyclitis, choroid hemorrhage, blindness and amaurosis fugax). The rates of OC were extracted and random effects models estimated their frequency. Heterogeneity was evaluated using I^2 . Inclusion criteria were studies in SpA of either children or adults that included a frequency of OC. Differences in frequencies of OC between childhood and adult disease were compared using chi squared tests.

Results: The search process identified 3164 articles, of which 41 were eligible for inclusion. A pooled random effects model showed the prevalence of uveitis was 24% [20%-27%] in adult AS (23 studies, N= 11943 patients), 10% [7%-14%] in adult PsA (9 studies, N=1817), and 17% [10%-24%] in undifferentiated adult SpA (9 studies, 6568 patients). In juveniles with AS, the prevalence of uveitis was 27% [16%-39%] (8 studies, 927 patients). In child onset PsA, uveitis occurred in 16% [10%-21%] (5 studies, N=498), and in juvenile undifferentiated SpA, uveitis had a frequency of 7% [1%-12%] (2 studies, N=1531). The differences in frequency of uveitis in adults vs. child onset SpA spectrum diseases were not significantly different between AS and JAS ($p=0.891$), PsA and JPsA ($p=0.732$) and between SpA and JSpA.

Conclusion: This meta-analysis compares the frequency of ocular involvement in seronegative spectrum diseases in adults and children where it appears that the frequency of uveitis is not statistically different in adult vs. child onset SpA and the subsets.

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Figure 1. The frequency of ocular manifestations in adults with ankylosing spondylitis

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SAT0353 HIGH PREVALENCE OF NEWLY DIAGNOSED AXIAL SPONDYLOARTHRITIS IN PATIENTS WITH ACUTE ANTERIOR UVEITIS AND CHRONIC BACK PAIN – PRELIMINARY RESULTS OF THE SP-EYE STUDY

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Background: One third of the axial spondyloarthritis (axSpA) patients suffers from acute anterior uveitis (AAU). Correspondingly, AAU can be the first sign of axSpA and previous studies described undetected axSpA in up to 40% of the patients with noninfectious AAU.

Objectives: To study whether referral of all patients with AAU and chronic back pain results in a high prevalence of newly diagnosed axSpA patients.

Table 1. Patient characteristics at referral.

	Overall (N=50)	Definite axSpA (N=13)	Suspicion of early axSpA (N=21)	No suspicion of axSpA (N=16)
Age	42 (±13)	44 (±15)	38 (±9)	45 (±15)
Gender, men	26 (52)	10 (77)	11 (52)	5 (31)
Back pain duration, years	15 (5-27)	14 (5-27)	9 (4-24)	21 (15-32)
Inflammatory back pain	21 (42)	9 (70)	9 (43)	3 (19)
>1 anterior uveitis	26 (52)	9 (69)	12 (57)	5 (31)
HLA-B27 positive	27 (54)	11 (85)	12 (57)	4 (25)
SpA features (ASAS)	3 (±1)	4 (±1)	3 (±1)	2 (±1)
SI joint abnormality	16 (32)	9 (69)	6 (29)	1 (6)
Sacroiliitis, mNY criteria	9 (18)	7 (54)	2 (10)	0 (0)
BASMI	2.4 (±2.4)	4.2 (±4.0)	1.6 (±0.7)	2.0 (±1.3)
BASDAI	3 (2-5)	2 (2-4)	3 (2-5)	3 (2-5)
ASDAS-CRP	21 (42)	6 (46)	10 (48)	5 (31)
≥2.1				

Legend: Numbers are depicted as mean (±SD), median (Q1-Q3) or number of patients (%).

Methods: A prospective ongoing observational study was started in April 2017, including all patients with noninfectious AAU and a history of back pain (≥3 months, started < age of 45 years), referred from six Ophthalmology clinics to the Rheumatology Outpatient Clinic of the VU medical center. Patients with a known systemic disease associated with AAU were excluded. Patient characteristics, laboratory (HLA-B27, C-reactive

protein) and patient reported parameters (e.g. BASDAI, ASDAS) were collected. X-rays were evaluated according to the modified New York (mNY) criteria for sacroiliitis. The clinical axSpA diagnosis was made by the rheumatologist. Patients were either diagnosed with 'definite SpA', 'suspicion of SpA' or 'no suspicion of SpA', based on the clinical assessment. Patients with 'definite SpA' were classified into radiographic or non-radiographic axSpA according to the ASAS criteria. Patients were treated according to standard care guidelines.

Results: Between April 2017 and October 2018, 65 patients were referred to the Rheumatology clinic, of whom 50 (mean age 42 years; 48% female; median back pain duration 15 years) met all inclusion criteria. AxSpA was diagnosed in 13 patients (26%), of whom seven fulfilled the criteria for radiographic and six for non-radiographic axSpA (table 1). Another 21 patients (42%) were considered clinically suspicious for early axSpA, of whom four had SI joint abnormalities and two even fulfilled the mNY criteria for sacroiliitis. Forty-two% of all patients had a high disease activity score (ASDAS $\geq$ 2.1). Patients diagnosed with axSpA were significantly more often male and HLA-B27 positive, had more SpA features and a higher BASMI score. In 25 patients treatment was started, mostly with nonsteroidal anti-inflammatory drugs. Two patients received a tumor necrosis factor inhibitor shortly after diagnosis.

Conclusion: In this study, 26% of the patients referred with noninfectious AAU and chronic back pain ($\geq$ 3 months, started < age of 45 years) were newly diagnosed with axSpA. Furthermore, another 40% required further follow up because of a suspicion for beginning axSpA. These results stress the importance of systematic referral of AAU patients with chronic back pain from the ophthalmologist to the rheumatologist, to improve early recognition of axSpA.

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SAT0354 CARDIOVASCULAR RISK IN YOUNG PATIENTS WITH LOW AXIAL SPONDYLOARTHRITIS ACTIVITY: PROMISING SCORING TOOLS

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Background: Patients (pts) with axial spondyloarthritis (axSpA) have increased cardiovascular morbidity and mortality, compared to the general population. However, assessment of cardiovascular risk (CVR) in axSpA is complicated, as in age < 40 years conventional CVR scales (SCORE, etc.) are not recommended, as conventional risk factors do not completely determine an increased CVR. The QRESEARCH Cardiovascular Risk Algorithm (QRISK) is the only scale of measuring probability of major cardiovascular events in pts aged 25 to 40.

Objectives: To measure CVR in young pts with low activity of axSpA, and to evaluate the interrelation between CVR, measured with QRISK and gene predisposition.

Methods: The study included 46 pts 25-40 years old with axSpA (ASAS criteria 2009), achieved inactive disease on TNF- α inhibitors. AxSpA activity was measured with ASDAS and BASDAI. CVR was calculated with the modified QRISK (QRISK3) (<https://qrisk.org/three/>). All parameters of QRISK3 were collected: smoking and diabetes statuses, angina or heart attack in a 1st degree relative <60, chronic kidney disease (3-5 stage), atrial fibrillation, blood pressure, migraines, rheumatoid arthritis, systemic lupus erythematosus, severe mental illness, atypical antipsychotic medication, regular steroid tablets usage, erectile dysfunction, cholesterol/HDL ratio, systolic blood pressure, Standard deviation (SD) of at least two most recent systolic blood pressure readings (mmHg), height (cm), weight (kg). Gene polymorphisms to main cytokines of axSpA and atherosclerosis pathogenesis were measure (IL17A-197, IL17F7 His/Arg, IL17F-11139 C/G, TNF-863, TNF-308, TNF-238, IL1B-31, IL4-590, IL6-174, IL10-1082, IL10-592, VEGF-2578, VEGF936, MMP2-1306, MMP3-5A6A, MMP9-1562).

To identify the relationship between genetic factors and clinical characteristics an exploratory factor analysis was performed.

Results: Mean age $\pm$ SD of included pts was 32.5 $\pm$ 3.87 years (26% of pts aged 25 – 30, 28.3% – 30-35, 28.3% – 35-40 years), 36 (78.3%) patient were male, symptoms duration 8.71 $\pm$ 4.72 years, duration of TNF- α inhibitor treatment 3.1 $\pm$ 2.4 years, ASDAS 1.95 $\pm$ 1.23, BASDAI 1.4 $\pm$ 0.8. All three age groups were comparable ($p \geq 0.05$). Out of the 46 pts 25 – 40 years old 34 (75.6%) had a low CVR and 11 (23.9%) had increased CVR (fig.1). Average QRISK3 score of all the patients was 1.18 $\pm$ 1.64%. In the 25-30 year old age QRISK3 was 1.51 $\pm$ 0.25%, in pts 30-35 years old – 1.09 $\pm$ 0.6%, in 35-40 years old – 2.31 $\pm$ 1.0% ($p < 0.05$ for the inter-group difference).

All patients with increased CVR had a direct associations with homozygous in CC allele IL17F-11139 gene, heterozygous in GA allele of TNF-308 and heterozygous in CG allele IL6-174. Negative associations were found between CVR and heterozygosity in His/Arg and homozygous in His/His of IL17F7, homozygosity in GG allele TNF-308, homozygosity in CC IL6-174, table 1. Interrelation of CVR with another gene polymorphisms was not significant (data are not present).

Table 1. Interrelation of QRISK 3 and Gene polymorphisms - exploratory factor analysis with 'varimax' rotation.

QRISK 3	IL17F-11139 CC	IL17F-11139 CG	IL17F7 His/His	IL17F7 His/Arg	IL17F7 Arg/Arg	IL6-174 CC	IL6-174 CG	TNF-308 GA	TNF-308 GG
0.458	0.830	-0.830	-0.824	0.809	-	-0.564	0.545	0.935	-0.935

Conclusion: A quarter of young axSpA pts had an increased 10-year probability of cardiovascular events. Gene polymorphisms in IL-6, IL17F, and TNF- α locuses are strongly associated with increased CVR. QRISK3 and gene polymorphisms could be promising tools in CVR assessment in axSpA.

Further larger studies are needed for evaluation of CVR factors in axSpA.

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