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SAT0390

PROTEIN CONVERTASE SUBTILISIN/KEXIN TYPE 9 IN THE INFLAMMATION-RELATED DYSLIPIDEMIA OF PATIENTS WITH SPONDYLOARTHRITIS

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Background: Proprotein convertase subtilisin/kexin type 9 (PCSK9) is a serine protease that regulates cholesterol metabolism through low-density lipoprotein receptor degradation and that has been linked with cardiovascular (CV) risk. Patients with spondyloarthritis (SpA) are prone to an increased and premature prevalence of atherosclerosis that has been linked to an atherogenic lipid profile among these individuals.

Objectives: The purpose of the present study was to examine whether PCSK9 levels are related to both abnormalities in the lipid profile and the severe atherosclerosis that occur in patients with SpA.

Methods: Cross-sectional study that encompassed 545 individuals; 299 patients with SpA and 246 statins intake-matched controls. PCSK9 and lipoproteins serum concentrations, standard lipid profile and carotid intima-media thickness and carotid plaques were assessed in patients and controls. A multivariable analysis, adjusted for standard CV risk factors, was performed to evaluate the influence of PCSK9 on SpA related dyslipidemia, disease related data, and subclinical carotid atherosclerosis.

Results: Lipid profiles showed that most lipid panel parameters (total cholesterol, HDL- and LDL-cholesterol, lipoprotein A and apolipoprotein A1) were lower in SpA patients compared to controls. Contrary, Apo B:Apo A1 and LDL:HDL cholesterol ratios were higher in SpA. The mean PCSK9 serum levels were significantly lower in SpA patients compared to controls (249 ± 105 vs. 199 ± 74 , ng/ml, $p=0.000$) in the univariate analysis. An additional multivariable analysis adjusting for demographics and CV risk factors plus all the lipid-related molecules (that were found to be different between patients and controls) disclosed that PCSK9 (beta coef. -44 [95%CI -60 - -27] % mg/dl, $p=0.000$) conserved its downregulation in SpA patients.

Traditional CV risk factors were not related to PCSK9 in controls and patients. Concerning lipid profile, some correlations were found between lipid-related molecules and PCSK9. In this sense, triglycerides were positively associated with PCSK9 in both patients and controls; total cholesterol and apolipoprotein A1 serum levels were associated with PCSK9 in patients but not in controls and; Lipoprotein (a) was related to PCSK9 only in controls (Table 1).

Regarding disease-related data, disease duration (log beta coef. 10 [0-20], $p=0.043$), and ASDAS-CRP (12 [95%CI 4 - 20], $p=0.004$) and BASFI (log beta coef. 12 [95%CI 0 - 25], $p=0.049$) scores, were positively related to PCSK9. Moreover, patients in the very high disease activity ASDAS-CRP category disclosed higher serum levels of PCSK9 compared to those in the remission category (32 [95%CI 2 - 63], $p=0.038$). Remarkably, while patients on current prednisone showed higher serum levels of PCSK9 (55 [95%CI 24 - 83] ng/ml, $p=0.001$), patients under anti-TNF alpha therapies exhibited inferior levels (beta coef. -26 [95%CI -43 - -9], $p=0.003$). PCSK9 in SpA patients with carotid plaque was higher compared to patients without plaque, however, this difference was lost after multivariable analysis.

Conclusion: PCSK9 is downregulated in SpA patients independently of other inflammation-related lipid profile modifications that occur in the disease. Disease activity is positively associated with PCSK9 serum levels. PCSK9 is univariately related to the presence of carotid plaque.

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SAT0391

DEPRESSIVE SYMPTOMS ARE ASSOCIATED WITH HIGHER DISEASE ACTIVITY AND WORSE FUNCTIONAL STATUS IN AXSPA: A CROSS-SECTIONAL ANALYSIS FROM RABBIT-SPA

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Background: Axial spondyloarthritis (axSpA) is a potentially severe chronic inflammatory disease with impact on function and quality of life. About 20-30% of axSpA patients show symptoms of depression or are diagnosed with depression [1]. Depression may influence outcome, especially patient reported outcomes.

Objectives: To assess differences in baseline characteristics and outcome parameters between patients with and without symptoms of depression using WHO-5 score.

Methods: RABBIT-SPA is a prospective longitudinal cohort study including axSpA patients enrolled at start of a new conventional treatment (including NSAID) or bDMARD. WHO-5 score was used to identify depressive symptoms categorised into 3 groups using validated cut-offs: moderate to severe depressive symptoms ≤ 28 , mild depressive symptoms 29-50, good well-being > 50 . Baseline values of patients categorised as having moderate to severe depressive symptoms were compared with the rest of the patients using t-test. Spearman correlation coefficient was calculated to analyse the relationship between WHO-5 score and other outcome parameters.

Results: A total of 848 axSpA patients were included in this analysis (table 1). Moderate to severe depressive symptoms were found in 221 patients (30%), 226 (31%) had mild depressive symptoms and 285 (39%) reported a good well-being. Percentages of patients with inflammatory back pain, peripheral arthritis or enthesitis as well as the number of affected joints (44 JC) and enthesal sites (using SPARCC) were higher in the group of patients with moderate to severe depressive symptoms.

Table 1.

Parameter	WHO-5 (≤ 28) Moderate severe N=221	WHO-5 (29-50/ > 50) Mild/well-being N=511
Age, mean	43.8	44.1
Female, n (%)	100 (45.2)	229 (44.8)
Disease duration, years, mean	6.8	6.5
Inflammatory back pain, n (%)	195 (88.6)	416 (81.6)
Enthesitis, n (%)	49 (22.3)	78 (15.4)
Peripheral arthritis (44 JC), n (%)	64 (29.1)	134 (26.3)
Uveitis, n (%)	45 (20.4)	76 (15)
IBD, n (%)	13 (5.9)	31 (6.1)
Psoriasis, n (%)	35 (15.8)	58 (11.4)
CRP positive (≥ 5 mg/l), n (%)	115 (59)	243 (55.1)
HLA-B27, n (%)	151 (72.6)	354 (74.2)
BMI ≥ 30 , n (%)	66 (30)	117 (23.6)
Comorbidities ≥ 3 , n (%)	50 (22.6)	89 (17.4)
Current smoking, n (%)	102 (47.2)	185 (36.7)

Table 2.

Parameter	WHO-5 (≤ 28) Moderate severe N=221	WHO-5 (29-50/ > 50) Mild/well-being N=511	p-value
PhysGA (NRS 0-10)	6.2 (1.6)	5.4 (1.9)	0.0001
ASDAS	6.1 (1.6)	4.2 (1.8)	0.0001
BASDAI (NRS 0-10)	3.5 (0.8)	2.9 (0.9)	0.0001
BASFI (NRS 0-10)	5.5 (2.2)	3.2 (2.2)	0.0001
ASAS-HI (0-17)	9.8 (3.1)	5.8 (3.1)	0.0001
PatGA (NRS 0-10)	7 (1.8)	5.4 (2.3)	0.0001
PatPain (NRS 0-10)	6.9 (1.9)	5.2 (2.3)	0.0001
PatSleep (NRS 0-10)	7.2 (2.4)	4.6 (2.9)	0.0001

Results are presented as mean $\pm$ SD.

All analysed outcome parameters (e.g. ASDAS, ASAS-HI, BASDAI, BASFI, patient global, physician global, pain, sleep) were significantly worse in the group of patients with moderate to severe depressive symptoms versus the other patients (table 2). This includes physician-reported, patient-reported and composite scores.

WHO-5 was highly correlated with all outcome parameters regardless of gender. Figure 1 shows the correlation of BASDAI and WHO-5 stratified for gender.

Figure 1.

Conclusion: Almost one third (30%) of axSpA patients in this analysis reported scores indicative of depressive symptoms and depression. The strong correlation of WHO-5 scores with patient and physician reported outcomes may be relevant for the management of patients with axSpA.

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SAT0392

DIAGNOSIS OF AXIAL SPONDYLOARTHRITIS IN DAILY CLINICAL PRACTICE – A SURVEY AMONG DUTCH RHEUMATOLOGISTS

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Background: Since publication of the ASAS classification criteria for axial spondyloarthritis (axSpA) in 2009¹ and the development of ASAS-endorsed recommendation for early referral of patients with a suspicion of axSpA,² awareness for non-radiographic (nr-) axSpA besides Ankylosing Spondylitis (AS) has increased. Still there is limited information of how nr-AxSpA is addressed in daily clinical practice.

Objectives: To get insight into the diagnostic phase of axSpA in daily rheumatologic practice in the Netherlands, and to explore if nr-axSpA is addressed differently from AS.

Methods: We set up a 21 multiple choice question survey for rheumatologists in the Netherlands with 5 general questions about their practice and 16 questions addressing the diagnostic phase of axSpA. The questionnaire was taken by representatives of the medical department of Novartis NL during structured face-to-face interviews. Rheumatologists in the Netherlands were invited to participate, aiming to get a sample of rheumatologists varying in geographical location and hospital type, as well as a mix of SpA-experts and non-SpA-experts. Rheumatologists gave approval for anonymous use of the data, which were entered in a database and subsequently analyzed using descriptive statistics.

Results: From October 15th 2019 until January 16th 2020, 36 Dutch rheumatologists participated in the face-to-face survey; 6 from university hospitals, 27 from general hospitals and 3 from private care centers. Most of axSpA patients (61%) were referred by the general practitioner and mean time between referral and first visit was 2-6 weeks. More than 50% of rheumatologists reported a mean symptom duration of >1 year and in 30% even >2 years before first visit. For diagnosing axSpA rheumatologists performed in almost all cases X-pelvis (mean 100% (SD 0%) for both AS and nr-axSpA), CRP/ESR (91% (26%) for AS; 94% (22%) for nr-axSpA) and HLA-B27 (74% (40%) for AS; 86% (26%) for nr-axSpA). MRI of the SI joints was performed in 31% and 82% of patients, respectively, and about 60% of the rheumatologists used of classification criteria for diagnosing axSpA. In addition, rheumatologists marked the level of importance of several (SpA) clinical features for making the diagnosis AS or nr-axSpA (Figure 1). Most rheumatologists graded inflammatory back pain, arthritis/enthesitis/dactylitis and uveitis as very important for contributing to the diagnosis. Functional impairment of the spine and male sex were mostly graded neutral or not important for making a diagnosis of axSpA. All features were graded of similar importance for the diagnosis AS and nr-axSpA, except for backpain starting before the age of 45, which was considered more important for diagnosing AS.

Conclusion: This survey among Dutch rheumatologists showed that in 30% of patients referred with possible suspicion of axSpA, symptom duration still was >2 years. Almost 60% of rheumatologists make use of the ASAS classification criteria for diagnosing nr-axSpA. Therefore, for early referral awareness of axSpA in first line should enhance. Furthermore, rheumatologists should become aware that classification criteria are not similar to diagnostic criteria and cannot be used as a tick box for diagnosis.

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Figure 1. Level of importance of clinical features for diagnosing axSpA
Values given as % of responders (total of 100% per feature)

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SAT0393

DISCREPANCY IN THE CARDIOVASCULAR RISK SEVERITY CALCULATED USING DIFFERENT RATING SCALES IN PATIENTS WITH AXIAL SPONDYLOARTHRITIS

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