REUMATIZAM

Volumen 65 Suppl 1 Godina 2018.

CECR Central European Congress of Rheumatology

Zagreb, hotel Westin, 6.–8. december 2018.

BOOK OF ABSTRACTS

www.hrd-kongres.org

UDK 616-002.77

ISSN 0374-1338

PLASMA LEVELS OF HSP90 ARE INCREASED IN AXIAL SPONDYLOARTHRITIS AND PSORIATIC ARTHRITIS PATIENTS WITH STRUCTURAL CHANGES

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Background: Hsp90 is required for the proper conformation and activation of a number of cellular proteins. It also regulates activation of innate immunity and the induction of proinflammatory cytokines and chemokines. These properties predispose Hsp90 to its potential role in the pathogenesis of autoimmune inflammatory rheumatic diseases.
Objectives: The aim of this study was to assess Hsp90 in the plasma of axial spondyloarthritis (axSpA) and psoriatic arthritis (PsA) patients compared to healthy controls (HC) and to determine its potential associations with disease activity and clinical features.
Methods: A total of 80 axSpA patients (37 females; mean age 37.0 years; disease duration 9.9 years; non-radiographic (nr-axSpA): 40; radiographic (r-axSpA): 40) and 21 PsA patients (9 females, mean age 52.1 years, disease duration 25.8 years) and age-/sex- matched healthy individuals (80 and 21 respectively) were included. Plasma Hsp90 levels were measured by ELISA (eBioscience, Vienna, Austria). Data are presented as median (IQR).
Results: Plasma Hsp90 levels were significantly increased in axSpA patients compared to healthy controls [15.7 (10.5–19.8) vs. 8.3 (6.6–11.7) ng/mL, p<0.001], but no difference between nr-axSpA and r-axSpA subsets was detected [14.8 (9.2 – 19.7) vs. 16.1 (10.5 – 21.6) ng/mL, p = 0.513]. Increased plasma levels of Hsp90 in PsA compared to HC did not reach statistical significance [11.23 (8.15–16.20) vs 8.54 (6.32–11.73) ng/mL, p=0.066]. Hsp90 levels in r-axSpA patients positively correlated with the MRI presence of active inflammatory lesions in sacroiliac joints (SPARCC MRI score for SI joints: r=0.594, p=0.020). Furthermore, increased Hsp90 levels in PsA patients were associated with the count of joint deformities (r=0.526, p=0.025). Plasma Hsp90 levels were neither significantly associated with other main clinical features of axSpA and PsA nor with markers of disease activity (e.g. ESR, CRP, BASDAI, ASDAS, DAPSA).
Conclusions: We demonstrated elevated plasma levels of Hsp90 in axSpA patients compared to healthy controls. In r-axSpA, Hsp90 may represent an independent marker of SI joint inflammation, whereas in PsA, plasma Hsp90 correlates with joint deformities. These data suggest that Hsp90 could become a potential biomarker of structural changes in SpA.
Acknowledgement: Supported by AZV-16-33542A, MHCR 023728 and SVV – 260373.
Disclosure: None

WHICH DEMOGRAPHIC DISEASE RELATED VARIABLES MAY BE PREDICTORS OF QUALITY OF LIFE IN PSORIATIC ARTHRITIS PATIENTS?

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Psoriatic arthritis (PsA) patients may face challenges other than skin disease, arthralgias, synovitis or dactylitis. These patients experience considerable disability and impaired quality of life, including sleep problems, depression/anxiety and problems in intimate life.
To assess if age at onset of PsA and psoriasis, duration of PsA and psoriasis severity of psoriasis, functional ability and disease activity are predictors of quality of life in PsA patients.
The study was conducted in two visits with five years period in between at the outpatient clinic of the rheumtology departments in two tertiary university hospitals, in Zagreb and Split. A total of 114 PsA patients (61 men, 53 women) were enrolled in the phase 1, while phase 2 included 104 patients (56 men, 48 women). Practising experienced rheumatologists collected demographic data and history of diseases (age, gender, age of diagnosis, duration of psoriasis and PsA). HAQ was used to assesses function and DAS28 for disease activity. For assessing quality of life patients filled SF36. Methods of descriptive statistics and canonical regression were used in this research.

Mean age of patients in phase 1 was 57,3±11,1 years (men 57,81 years, women 56,83years) and mean age of patients in phase 2 was 60,1±11,3 years (men 60,1 years, women 60,1years). Mean duration of psoriasis in phase 1 was 211,9±147,1 months and in phase 2 was 251,6±153,9 months, while mean duration of PsA in phase 1 was 132,5±113,6 months and in phase 2 was 171,7±108,4 months. Canonical regression was performed in both phases and showed that age of PsA diganosis and duration of PsA were significantly associated with worse functional ability, but not with the quality of life of PsA patients.

Based on the result of this research, functional ability of PsA patients depends on age at diagnosis and disease duration which could be considered as the predictors of functional ability in PsA patients.

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Disclosure: None

COMPARISON OF COMPUTERIZED COLOR TELETHERMOGRAPHY AND NAILFOLD CAPILLAROSCOPY IN DIAGNOSTICS OF SECONDARY RAYNAUD'S PHENOMENON IN CHILDREN

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Background: Raynaud's phenomenon (RP) is a condition characterized by periodical vasospasm in response to cold temperatures or emotional stress exposure. To distinguish between primary and secondary RP, clinical examination, laboratory findings, nailfold capillaroscopy (NC) and computerized color telethermography (CCTT) are necessary.

Objectives: To analyze RP features in children in correlation with the most frequently associated laboratory tests, CCTT and NC.

Methods: This study included children clinically recognized as RP in the period from 2011–2017 at the Referral Center for Pediatric and Adolescent Rheumatology Republic of Croatia. Laboratory data included serum level of IgG, C3, C4, CH50, RF, presence of ANA and ANCAs.

Results: CCTT, performed in 188 patients, classificated 15 as primary RP, 57 as secondary RP, while in 47 no classification could be made. Among patients classificated as secondary RP on CCTT, the most of them, 14 (24.6%), were diagnosed with juvenile idiopathic arthritis (JIA). There were 5 patients (8.8%) with systemic sclerosis (SSc), 2 (3.5%) with mixed connective tissue disease (MCTD), 1 (1.7%) with systemic lupus erythematosus, 11 (19.3%) with undifferentiated connective tissue disease (UCTD), whilst 24 (42.1%) had no evident other disease. The appearance of abnormal capillaroscopic pattern was found in 17 out of 89 patients and nonspecific capillaroscopic alterations were noticed in 27. Among patients with the appearance of abnormal capillaroscopic pattern, 5 (29.4%) were diagnosed with SSc, 3 (17.6%) with JIA, 2 (11.8%) with MCTD, 1 (5.9%) with dermatomyositis, 2 (11.8%) with UCTD, whilst 4 (23.5%) had no evident rheumatic disease. All patients with RP diagnosed with SSc and MCTD had both the appearance of abnormal capillaroscopic pattern and CCTT findings consistent with secondary RP. No statistically significant difference between NC and CCTT in predicting the diagnosis of secondary RP was determined (McNemar's test, $\chi 2 = 0.042$, $p = 0.838$) nor was there significant difference between NC and CCTT in regard to the results of laboratory findings ($\chi 2 = 1.042$, $p = 0.307$).

Conclusions: We found that nailfold capillaroscopy and CCTT were equally effective in the diagnosis of secondary RP in children. There was no difference between them in regard to the results of immunological laboratory findings distinctive with secondary RP.

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Disclosure: None