AB0324

DISTRIBUTION AND CLINICAL SIGNIFICANCE OF ANTI-HETEROGENEOUS NUCLEAR RIBONUCLEOPROTEIN A2 ANTIBODY IN CONNECTIVE TISSUE DISEASES

Y. Wang, F. Mu, Y. Fang. *Department of Rheumatology, Southwest Hospital, the Third Military Medical University, Chongqing, China*

Background: The anti-heterogeneous nuclear ribonucleoprotein A2 (hnRNP-A2) antibody is specific for rheumatoid arthritis (RA). But, it is also reported that there is no significant difference between RA and systemic lupus erythematosus (SLE) in terms of the antibody.

Objectives: To investigate the distribution and clinical significance of anti-hnRNP-A2 antibody in connective tissue diseases.

Methods: Serum anti-hnRNP A2 antibody level was measured by solid-phase enzyme linked immunosorbent assay (ELISA) in 1464 patients with RA, 209 patients with SLE, 204 patients with ankylosing spondylitis (AS), 63 patients with mixed connective tissue disease (MCTD), 133 patients with undifferentiated connective tissue disease (UCTD), 60 patients with Sjogren syndrome (SS), 47 patients with polymyositis/dermatomyositis (PM/DM), and 45 patients with systemic sclerosis (SSc). The positivity rate of anti-hnRNP-A2 antibody was compared among various patient groups, and its correlation to clinical and laboratory parameters and its diagnostic significance were analysed.

Results: The positivity rate of anti-hnRNP-A2 antibody was 38.0% (556/1464), 36.8% (77/209), 3.9% (8/204), 52.4% (33/63), 17.3% (23/133), 5.0% (3/60), 4.3% (2/47), and 8.9% (4/45) in RA, SLE, AS, MCTD, UCTD, SS, PM/DM and SSc, respectively. The rate differed insignificantly between the RA, SLE and MCTD groups ($p>0.05$), but was significantly higher than in other disease groups ($p<0.01$). The titers of anti-hnRNP-A2 antibody were significantly higher in the RA, SLE, MCTD groups than in other disease groups ($p<0.01$), but differed insignificantly between the RA, SLE, MCTD groups ($p>0.05$). In RA patients, anti-hnRNP-A2 antibody weakly correlated negatively to anti-Cyclic citrullinated peptide (CCP) antibody ($r=-0.135$, $p<0.01$), but correlated insignificantly to age, course of disease, time of morning stiffness, erythrocyte sedimentation rate, C reactive protein, rheumatoid factor (RF), anti-keratin antibody (AKA) and glucose phosphate isomerase (GPI) ($p>0.05$).

Conclusions: Anti-hnRNP-A2 antibody can be found in various connective tissue diseases, and its positivity rate is relatively high in RA, SLE and MCTD. It is not a RA-specific antibody. In RA, anti-hnRNP-A2 antibody does not coincide with other RA-related serological indicators; hence, it may serve as an adjunctive indicator for RA diagnosis.

REFERENCES:

- Smolen JS, Aletaha D, McInnes IB: Rheumatoid arthritis [J]. *Lancet* 2016;388(10055):2023–2038.
- Gavrilă BI, Ciofu C, Stoica V. Biomarkers in Rheumatoid Arthritis, what is new? [J]. *J Med Life* 2016;9(2):144–8.
- Hassfeld W, Steiner G, Hartmuth K, et al. Demonstration of a new antinuclear antibody (anti-RA33) that is highly specific for rheumatoid arthritis [J]. *Arthritis Rheum* 1989;32:1515–1520.
- 2004;4(4):288–290.
- Tomom H, Mostafa GA, El-Shahat EM. Autoantibody to heterogeneous nuclear ribonucleoprotein-A2(RA33) in juvenile idiopathic arthritis: clinical sig.

Acknowledgements: This work was financially supported by the Science and Technology Innovation Plan of Southwest Hospital (No. SWH2016JCZD-06) and the National Natural Science Foundation of China (No. 30973827).

Disclosure of Interest: None declared

DOI: 10.1136/annrheumdis-2018-eular.1177

AB0325

CLINICAL OUTCOME OF 2 YEARS TREATMENT OF THE EARLY PHASE RHEUMATOID ARTHRITIS

Y. Sugimura¹, T. Kashiwagura², M. Kobayashi³, N. Miyakoshi⁴, Y. Shimada⁴.
¹Orthopedic Surgery, Nakadori General Hospital; ²Orthopedic Surgery, Akita City Hospital; ³Orthopedic Surgery, Hiraka General Hospital; ⁴Orthopedic Surgery, Akita University Graduate School of Medicine, Akita, Japan

Background: Few studies have reported long term clinical outcome of patients with early phase rheumatoid arthritis (RA).

Objectives: The objectives of this study were to investigate outcome of 2 years treatment for RA which was started less than 12 months after RA symptoms first appeared and to evaluate prediction factors of poorly controlled patients at 2 years.

Methods: From a total of 1663 RA patients registered in the Akita Orthopaedic Group on Rheumatoid Arthritis (AORA), 66 patients were treated within the first year of RA appearance, and enrolled in this study. Sex, age, RA disease duration, Steinbroker's stage, Steinbroker's class, medications and DAS28-CRP at

the baseline and 2 years post-treatment were evaluated. Furthermore, we compared the group of remission (REM) or low disease activity (LDA) with the group of medium disease activity (MDA) or high disease activity (HDA) at 2 years.

Results: At the baseline, the patients included 13 males and 53 females. Mean age and RA disease duration were 59^{21–85} years and 7^{1–11} months, respectively. Fifty-four, 8, 4 and 0 patients were classified into Steinbroker's stage I, II, III, and IV, respectively. Thirty-nine, 25, 2 and 0 patients were classified into Steinbroker's class I, II, III, and IV, respectively. Thirty-seven (56%), 24 (36%), and 16 (24%) patients were treated with MTX, DMARDs, and PSL, respectively. In DAS28-CRP, 19 (29%), 13 (20%), 32 (48%), and 2 (3%) patients showed REM, LDA, MDA, and HDA, respectively. Forty-four patients were followed-up for 2 years. At 2 years, 30, 7, 5, and 2 patients were classified into Steinbroker's stage I, II, III, and IV, respectively. Thirty-one, 12, 1, and 0 patients are classified into Steinbroker's class I, II, III, and IV, respectively. In DAS28-CRP, 33 (75%), 4 (9%), 7 (16%), and 0 (0%) patients showed REM, LDA, MDA, and HDA, respectively. Compared with the group of REM or LDA, the group of MDA or HDA had significantly older age ($p=0.018$), higher Steinbroker's stage ($p=0.012$) and higher DAS28-CRP ($p=0.049$) at the baseline.

Conclusions: At 2 years, 75% of patients with early phase RA achieved REM. Older age, higher Steinbroker's stage and higher DAS28-CRP at the baseline could be prediction factors of poorly controlled patients at 2 years.

Disclosure of Interest: None declared

DOI: 10.1136/annrheumdis-2018-eular.7426

AB0326

MATRIX METALLOPROTEINASE-3 IS A GOOD PREDICTOR FOR JOINT DESTRUCTION ONLY IN MALE PATIENTS WITH RHEUMATOID ARTHRITIS

Y. Yamada^{1,2}, K. Inui¹, T. Okano¹, K. Orita³, Y. Sugioka⁴, K. Mamoto¹, T. Koike^{3,4}, M. Tada⁵, H. Nakamura¹. ¹Department of orthopedics surgery, Osaka City University; ²Department of orthopedics surgery, Yodogawa Christian Hospital, Osaka City; ³Search Institute for Bone and Arthritis Disease (SINBAD), Shiraheima Foundation for Health and Welfare, Wakayama; ⁴Center for Senile Degenerative Disorders (CSDD), Osaka City University; ⁵Department of orthopedics surgery, Osaka City General Hospital, Osaka City, Japan

Background: Serum level of matrix metalloproteinase-3 (MMP-3) is elevated by synovial inflammation. It destroys articular cartilage such as proteoglycans so that it has been used as a clinical biomarker of joint destruction in patients with rheumatoid arthritis (RA).

Objectives: The purpose of this study is to investigate a relation between radiographic progression, MMP-3 and other factors such as ultrasonography (US) findings.

Methods: 259 patients (213 women) with RA were enrolled in this study. Their baseline data such as age, sex, disease duration, use of glucocorticoid (GC) or DMARDs, disease activity (DAS28), laboratory data (MMP-3, CRP, RF and ACPA), and the Power Doppler (PD) score at digits and wrists by US were collected. The modified total Sharp score (mTSS), erosion score (ERN) and joint space narrowing (JSN) were examined at baseline and 1 year. Their changes from baseline to 1 year (Δ) were calculated. Relationship between baseline MMP-3 and other variables was examined. Predictors for joint destruction was investigated by multiple regression. Statistical analysis was separated by sex because upper limit of MMP-3 is different between men and women.

Results: MMP-3 showed no correlations with GC use, DAS28, CRP or mTSS. MMP-3 was correlated with Δ mTSS and Δ JSN only in men, but PD score only in women (table 1). Multiple regression analysis revealed that MMP-3 was correlated independently with Δ mTSS only in men, whereas PD score was correlated independently with Δ mTSS in women. PD score, but not MMP-3, could predict joint destruction at 1 year in women (table 2).

Abstract AB0326 – Table 1. Correlation with baseline MMP-3; univariate analysis

variables	Male		Female	
	correlation coefficient	P value	correlation coefficient	P value
DAS28-ESR	−0.004	0.980	0.043	0.191
duration	−0.225	0.133	0.088	0.189
RF	−0.083	0.687	−0.192	0.024
ACPA	−0.050	0.797	0.051	0.538
CRP	−0.003	0.986	0.060	0.370
GC use	0.042	0.781	0.109	0.104
mTSS	0.029	0.850	0.100	0.138
Δ mTSS	0.375	0.010	0.074	0.267
Δ ERN	0.223	0.137	0.101	0.133
Δ JSN	0.412	0.004	−0.009	0.891
PD score	0.224	0.143	0.181	0.010

Δ : difference in values from baseline to 1 year