AB1116

CORRELATION BETWEEN SERUM RESISTIN AND CAROTID INTIMA-MEDIA THICKNESS AS A MARKER OF SUBCLINICAL ATHEROSCLEROSIS IN SYSTEMIC LUPUS ERYTHEMATOSUS

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Background: Although SLE management has improved markedly in the last few decades, cardiovascular disease (CVD) is still one of the most important leading cause of death. Subclinical atherosclerosis is increased in patients with SLE and it is not fully explained by traditional cardiovascular risk factors. Evidences suggest that resistin is involved in pathological processes leading to CVD including; inflammation, endothelial dysfunction, thrombosis, angiogenesis and smooth muscle cell dysfunction. Objectives: to determine the relation between serum resistin level and carotid intima-media thickness by doppler technique as a marker of premature or subclinical atherosclerosis in SLE patients.

Methods: this is a cross-sectional study, carried on thirty Egyptian SLE patients who fulfilled the 2012 Systemic Lupus International Collaborating Clinics (SLICC) criteria. All patients had metabolic syndrome were excluded. Twenty healthy individuals, non smokers, matched for age and sex as controls. All patients were subjected to detailed history taking, a complete clinical examination. Laboratory investigations were done included serum resistin and HOMA was calculated, also the SLE disease activity index (SLEDAI 2K) and SLE disease damage index (SLEDDI) were applied and the scores were estimated. The carotid intima media thickness (CIMT) was assessed by carotid doppler ultrasonography.

Results: There was no statistically significant difference in serum resistin between SLE patients and healthy individuals ($p=0.804$). As regards the correlation with disease parameters Serum resistin show statistically significant correlation with hs-CRP ($p=0.027$), HDL ($p<0.001$), and ANA titre ($p=0.013$), but no significant correlation with HOMA, SLEDAI, SLEDDI, CIMT and different clinical activities. There was a statistically significant difference in CIMT between SLE patients and the controls ($P=0.006$).

Conclusion: Although serum resistin is correlated with two of cardiovascular risk factors (HDL, hs-CRP), it doesn't correlate significantly with CIMT in SLE patients. Resistin is correlated to inflammation more than subclinical atherosclerosis. Moreover, SLE patients have higher CIMT than healthy population so SLE is considered a CVD risk factor.

REFERENCES

- [1] Gisterà A, Hansson GK. The immunology of atherosclerosis. *Nature Reviews Nephrology*. 2017 Jun;13(6):368.
- [2] Stanic AK, Stein CM, Morgan AC, Fazio S, Linton MF, Wakeland EK, Olsen NJ, Major AS. Immune dysregulation accelerates atherosclerosis and modulates plaque composition in systemic lupus erythematosus. *Proceedings of the National Academy of Sciences*. 2006 May 2;103(18):7018-23.
- [3] Chu S, Ding W, Li K, Pang Y, Tang C. Plasma resistin associated with myocardium injury in patients with acute coronary syndrome. *Circulation Journal*. 2008;72(8):1249-53.

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AB1117

DIAGNOSTIC VALUE OF ANTI-CYCLIC CITRULLINATED PEPTIDE ANTIBODIES FOR JUVENILE IDIOPATHIC ARTHRITIS IN KOREA

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Background: Anti-cyclic citrullinated peptide (CCP) antibodies are considered to have specificity for rheumatoid arthritis (RA). However, the diagnostic value of anti-CCP antibody has not been proved in juvenile idiopathic arthritis (JIA).

Objectives: The purpose of this study was to access the prevalence of anti-CCP antibodies in Korean children with JIA, and to investigate the diagnostic accuracy of anti-CCP antibodies according to JIA subgroup.

Methods: JIA patients were recruited from Severance Children's Hospital, Seoul, Korea from 2004 to 2018. Diagnosis of JIA was made by pediatricians according to the International League of Associations for Rheumatology (ILAR) classification. Control group consisted of healthy children with anti-CCP antibodies test, who had visited the outpatient clinic of the hospital for JIA suspected symptoms, but diagnosed as not JIA. Enzyme-linked immunosorbent assay (ELISA) was used for detection and quantification of anti-CCP antibodies.

Results: Study subjects included 295 JIA patients and 165 controls. Among the JIA children, 14 (8.6%) patients were found to be positive for anti-CCP antibodies. 1 (0.6%) of the control group was positive for anti-CCP antibodies. The positive rates of anti-CCP were highest in rheumatoid factor (RF)-positive polyarticular JIA ($n=8$, 66.7%), followed by systemic JIA ($n=3$, 3.4%) and oligoarticular JIA ($n=3$, 2.2%). The sensitivity and specificity of anti-CCP antibodies in all JIA patients was 4.7% and 99.4%.

Conclusion: Anti-CCP antibodies have high specificity for JIA, but its sensitivity is low. Therefore, it can provide additional help for diagnosis of JIA with its high specificity. In particular, anti-CCP antibodies have the highest sensitivity in RF-positive polyarticular JIA than other subgroups, so it can be a more effective diagnostic tool in the subtype.

REFERENCES

- [1] Ferucci ED, Majka DS, Parrish LA, et al. Antibodies against cyclic citrullinated peptide are associated with HLA-DR4 in simplex and multiplex polyarticular-onset juvenile rheumatoid arthritis. *Arthritis Rheum* 2005; 52:239.
- [2] Hamooda M, Fouad H, Galal N, et al. Anti-cyclic citrullinated peptide antibodies in children with Juvenile Idiopathic Arthritis. *Electron Physician* 2016; 8:2897.
- [3] Petty RE, Laxer RM, Wedderburn LR. Juvenile idiopathic arthritis. In : Petty RE, Laxer RM, Lindsley CB, Wedderburn LR. *Textbook of Pediatric Rheumatology*. 7th ed. Philadelphia: W.B Saunders, 2016:188-204.

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AB1118

THE ROLE OF ANGIOPOETIN-LIKE PROTEIN 4 TYPE IN PROGRESSION OF INFLAMMATORY CHANGES IN RHEUMATOID ARTHRITIS

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Background: Angiopoietin-like protein 4 (ANGPTL4) is actively involved in the processes associated with inflammation, angiogenesis and lipid metabolism in rheumatoid arthritis (RA).

Objectives: To study of the effect of ANGPTL4 on the features of the inflammatory process in RA.

Methods: The study included 36 RA patients (aged from 33 to 64 years old). A control group (12 people) comprised healthy individuals aged 28 to 52 years old, 28 patients with osteoarthritis (OA) aged 48 to 70 years and 14 people with ankylosing spondylitis (AS) aged 39 to 62 years. Levels of ANGPTL4 in serum were determined by the enzyme immunoassay using the commercial test systems «Human Angiopoietin-like Protein 4 ELISA» from «Bio Vendor» (Czech Republic). Serum C-reactive protein (CRP) levels, erythrocyte sedimentation rates (ESR), rheumatoid factor (RF) titers, and anti-cyclic citrullinated peptide antibody (anti-CCP) were also measured in patients with RA.

Results: The following results were obtained: the level of ANGPTL4 was significantly higher in patients with RA than in patients with OA, AS, and healthy individuals ($p = 0.04$, $p = 0.021$, $p = 0.038$, respectively). A strong positive correlation was found between the level of ANGPTL4 and the activity of RA according to DAS28 ($r = 0.71$, $p = 0.002$). There is no reliable association between ANGPTL4 and anti-CCP ($p > 0.05$). The ANGPTL4 level in the serum was correlated with levels of ESR ($r = 0.42$, $p = 0.019$), CRP ($r = 0.49$, $p = 0.007$) and the Sharp score of radiologic change ($r = 0.39$, $p = 0.045$) in RA. Hypervascularization rates were significantly correlated with ANGPTL4 in patients with RA ($r = 0.38$, $p = 0.002$) according to Doppler data. ANGPTL4 can activate proliferation processes in the synovial membrane by binding to integrin- $\alpha v \beta 3$. Besides,