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,

the concentration of mast cells is increased in the synovium of affected joints. Mast cells significantly influence angiogenesis through the production of proangiogenic cytokines, including ANGPTL4.

Conclusion: Changes of the level of ANGPTL4 in the serum of patients with RA may be a potential biomarker of disease activity, severity of neovascularization, inflammation and development of bone erosion.

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AB1119

THE PRESENCE OF SYNOVITIS IS THE MAIN FACTOR INFLUENCING THE DEVELOPMENT OF PAIN SYNDROME IN ARTHRITIS OF THE KNEE JOINT

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Background: Dysfunctions and pain syndrome in lesions of the knee joint can significantly discomfort a sick person and lead to a persistent decrease in physical activity and disability. Often pain syndrome precedes radiographic appearance of the structural changes in the joint and is accompanied by an increase in number of different changes in the synovium according to ultrasound investigation.

Objectives: To investigate the clinical significance of ultrasound criteria of changes in the synovial membrane of the knee joint cavity and its role in the assessment of pain in gonarthrosis.

Methods: 30 people aged 30 to 50 years with osteoarthritis of the knee joint were under observation; assessment of the severity of pain in the knee when walking was at least 40 mm on a visual analogue scale (VAS). Ultrasound examination of the knee joint was carried out according to standard procedure using a linear sensor with a frequency of 05.12 MHz in an ultrasonic diagnosis system Accuvix V10 (Samsung Medison, Korea).

Results: The evaluation of ultrasound changes was performed in the upper inversion of the knee joint according to the following criteria: the severity of intraarticular effusion (1), synovial proliferation (2), local vascularization of the synovial membrane by power doppler (3). All patients were divided into three groups, according to the severity of pain in the knee joint: group I (12 people) - 41–59 mm, group II (10 people) - 60–79 mm, group III (8 people) - 80–100 mm on the VAS scale. By comparing changes in the knee joint by ultrasound data in patients of different groups, the following results were obtained: group I: severity of intraarticular effusion - 10 people (minimal changes in 60%, moderate in 20%, expressed in 20%), synovial proliferation - 4 people (moderate changes in 50%, expressed in 50%), local vascularization of synovium - 6 people (minimal changes in 66.7%, moderate in 16.7%, expressed in 16.6%); Group II: severity of intraarticular effusion - 9 people (55.6%, 22.2% and 22.2%), synovial proliferation - 3 people (0%, 33.3% and 66.7%), local vascularization of the synovial membrane - 4 people (25%, 25% and 50%, respectively); group III: severity of intraarticular effusion - 8 people (62.5%, 12.5% and 25%), synovial proliferation - 5 people (20%, 40% and 40%), local vascularization of the synovial membrane - 3 people (per 33.3%, respectively).

Conclusion: The use of ultrasound in the diagnosis of diseases of the knee joints allows to reliably determine the structural and functional changes in all components of the knee joint. The severity of pain in gonarthrosis is most associated with the presence of synovitis in the joint.

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AB1120

DIAGNOSTIC ROLE OF NEUROMUSCULAR ULTRASOUND IN CUBITAL TUNNEL SYNDROME

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Background: Cubital tunnel syndrome (CuTS) is the second most common compressive neuropathy of the upper limb following carpal tunnel syndrome and is the most common site for entrapment for the ulnar nerve

Objectives: Our aim is to evaluate the role of ultrasonography (US) as a diagnostic tool for Cubital tunnel syndrome (CuTS) in comparison with nerve conduction study (NCS).

Methods: twenty elbows with CuTS and twenty asymptomatic controls were assessed by NCS and underwent ultrasonography of elbows. Data from patients and controls were compared to determine the diagnostic relations in patients with CuTS and the grade of severity

Results: There was a high degree of correlation between NCS of the ulnar nerve, clinical parameters and variable US measurements. The CSA of the ulnar nerve was the most sensitive parameter and a cut-off point of 9.5 mm² behind medial epicondyle was found to be 100% sensitive and 80% specific. The ulnar nerve ratios (UNR) had a diagnostic accuracy of 95% with 85% specificity.

Conclusion: Ultrasonographic measurements of the ulnar nerve CSA and UNR have a comparable diagnostic value as a non-invasive and an alternative modality for the evaluation of CuTS

REFERENCES

- [1] Simon N, Ralph J, Poncelet A, Engstrom J, Chin C, Kliot M. A comparison of ultrasonographic and electrophysiologic 'inching' in ulnar neuropathy at the elbow. *Clin Neurophysiol.* 2015;126(2):391-398.
- [2] Omejec G, Podnar S. Normative values for short segment nerve conduction studies and ultrasonography of the ulnar nerve at the elbow. *Muscle nerve.* 2015;51(3):370-377.
- [3] Yoon J, Walker F, Cartwright M. Ultrasonographic swelling ratio in the diagnosis of ulnar neuropathy at the elbow. *Muscle nerve.* 2008;38(4):1231-1235.
- [4] Bayrak A, Bayrak I, Turker H, Elmali M, Nural M. Ultrasonography in patients with ulnar neuropathy at the elbow: Comparison of cross sectional area and swelling ratio with electrophysiological severity. *Muscle nerve.* 2010;41(5):661-666.

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AB1121

EFFICACY AND SAFETY OF ULTRASOUND GUIDED ASPIRATION AND INTRA LESIONAL CORTICOSTEROIDS INJECTION OF RUPTURED BAKER'S CYST

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Background: Baker's cyst is the most common mass in the popliteal fossa and results from fluid distension of the gastrocnemio-semimembranosus bursa. The most common complication of Baker's cyst is the rupture or dissection of fluid into the adjacent proximal gastrocnemius muscle belly, which results in a pseudothrombophlebitis syndrome mimicking symptoms of DVT.

Treatment of ruptured Baker cysts ranged from conservative management to surgical resection.

Ultrasonographic guided aspiration and corticosteroids injection may be an effective and easy method of management of these cases.

Up to the best of our knowledge, this is the first study to detect the efficacy and safety of ultrasonographic guided aspiration and injections of ruptured Baker cysts.

Objectives: To evaluate the efficacy and safety of ultrasonographic guided aspiration and local corticosteroids of ruptured Baker cysts based on follow-up clinical and sonographic results.

Methods: A retrospective study was conducted on 42 patients (12 males and 30 females, mean age 36 +/- 10 SD years) affected by a ruptured Baker cysts associated to knee joint disorders in the period between January 2013 to January 2019. The diagnosis was done by clinical presentation of acute calf pain, swelling, tenderness at the calf muscles and ultrasonographic evidences of ruptured baker cysts in the form of free fluid collection in the calf connected to a well defined cyst at the back of knee.

All cases were treated by ultrasonographic guided aspiration and intralesional injection of corticosteroids once or twice one week apart. Follow up were done on a weekly basis until complete resolution of symptoms then 3 months later. Visual analogue scale (VAS) for calf pain and Rauschnig-Lindgren and Lysholm Knee Scoring Scales were used to assess pre/post-injection knee functions.

Results: The primary diagnoses to patients presented with ruptured Baker cyst in this study were as follow: 18 (42.8%) cases with rheumatoid