Association of circulating endothelial cells with flow mediated vasodilation and disease activity in patients with systemic lupus erythematosus

Rania Gaber, Mai Salama, Mervat El Sergany, Elham Kassem, Hanan El Saadany, Nesreen A. Kotb

Department of Cardiology, Tanta University, Egypt, Department of Rheumatology, Tanta University, Egypt, Department of Rehabilitation and Internal Medicine, Tanta University, Egypt.

Objectives: The aim of this study was to determine the correlation between CEC count and endothelial function, disease activity, and organ involvement in patients with SLE.
Background: Premature atherosclerosis in patients with systemic lupus erythematosus (SLE) is not explained by traditional risk factors. Circulating endothelial cells (CEC) have been identified as a surrogate marker of endothelial dysfunction
Methods: The present study included 30 premenopausal women with SLE and 20 age and sex matched healthy controls (HC). Endothelial function was studied by flow mediated vasodilation (FMD%) in the brachial artery. Serum levels of VCAM-1, ICAM-1 were measured.
Results: >FMD% was lower in patients with SLE than HC (3.5 ± 0.4 vs 9.7 ± 3.2, $p < 0.001$). CEC count was significantly elevated in patients with SLE compared to HC (38 ± 18 vs 7 ± 3, $p < 0.001$). CEC count correlated positively with systemic lupus activity score ($r = 0.97$), and negatively with FMD% ($r = -0.94$). Serum levels of VCAM-1 and ICAM-1 were significantly elevated in patients with SLE compared to HC ($p < 0.001$). There was a significant correlation between CEC count and vasculitic skin lesions ($p < 0.01$), renal involvement ($p < 0.01$), and VCAM-1 levels ($p < 0.001$).
Conclusion: CEC is associated with endothelial dysfunction, disease activity and increased VCAM-1 levels in patients with SLE. These findings suggest a potential role of CEC in the pathophysiology of cardiovascular disease in these patients.

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Can serum tenascin-c be used as a marker of inflammation in patients with dilated cardiomyopathy?

Alyaa A. Kotby [a,b], Manal M. Abdel Aziz [a,b], Waleed M. El Guindy [a,b], Amira N. Moneer [a,b]

[a] Department of Pediatrics, Faculty of Medicine, Ain Shams University, Cairo, Egypt, [b] Department of Clinical Pathology, Faculty of Medicine, Ain Shams University, Cairo, Egypt.

Introduction: Tenascin-C (TN-C), an extracellular matrix glycoprotein, is specifically expressed at high levels during embryonic development, but not in the adult heart. TN-C reappears at sites of inflammatory tissue remodeling or wound healing under various pathologic conditions, such as acute myocardial infarction, acute myocarditis,and some cases of cardiomyopathy. Therefore, the expression of TN-C might be useful for detecting the clinical characteristics of, and ventricular remodeling in, dilated cardiomyopathy (DCM).
Objectives: To evaluate the role of TN-C as a sensitive marker for active inflammation in children with newly onset DCM
Methods: This case controlled study included 24 patients aged from 6 to 72 months with a mean age 45.19 ± 11.03 compared to 20 age and sex matched healthy children. The subjects were divided into 3 groups. Group 1: included twelve patients with acute onset DCM, (less than 6 months duration) ,Group 2: included twelve patients with established chronic DCM, (more than 6 months duration) and Group 3: twenty (20) healthy age and sex matched children served as control group: all studied patients were subjected to full medical history ,thorough clinical examination.
Investigations included: Serum Tenascin-C , chest X-ray and echocardiography using conventional parameters as M-mode, 2D, CW Doppler and 2D speckle tracking technique.
Results: The 2D Speckle Tracking data showed that the patients group had lower Global peak Strain Longitudinal Apical long axis(G SL ap lax), G peak SL apical 4 chamber(a4c), G peak SL apical 2 chamber(a2c) and G peak SL average with highly statistical significant difference using ***T***-test. Moreover the global echocariographic assessment showed that acute cases had lower G peak SL ap lax, G peak SL ap4c, G peak SL a2c, G peak SL avg, than the chronic cases with a highly statistically significant difference (***P*** < 0.001). These data confirm furthermore the global affection of the acute DCM cases than the chronic cases.Our study showed highly significant statistical elevation of serum Tenascin-c among DCM patients than in controls (***P*** value <0.001). It also showed that acute cases had statistically significant higher serum levels of Tenascin-c than chronic cases (***P*** value <0.001). This indicates that serum Tenascin-C level is elevated in cases of acute dilated cardiomyopathy and is decreased significantly in chronic DCM. And showed that circulating tenascin-C is generally associated with the severity of left ventricular dysfunction.
Conclusions: Serum-Tenascin Level was significantly increased in patients with idiopathic dilated cardiomyopathies. This increase was noted in acute and chronic cases, with significant difference between both being higher in the acute cases, and associated with the severity of heart failure and the LV dysfunction as detected by 2D speckle tracking echocardiography.

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The trans-caval approach for surgical correction of sinus venosus atrial septal defect with partial anomalous pulmonary venous drainage into the superior vena cava : Early experience in Alexandria University

Ibrahim Khadragi *, Mohamed Nassar

Cardiothoracic Surgery, Faculty of Medicine, Alexandria University, Egypt.

Objectives: Many techniques have been developed to address the partial anomalous pulmonary venous drainage into the superior vena cava with or without sinus venosus atrial septal defect.

The morphology of this anomaly is responsible for the possible surgical complications including sinus node dysfunction, systemic and/or pulmonary venous channels obstruction.

Since early 2010, we started to slowly adopt the vertical trans-caval incision for the correction of this anomaly. Here, we present our early experience in Alexandria University with six patients operated using this approach.
Methods: Between April 2010 and April 2011, six patients, aged between 7 and 35 years, were addressed using one patch of Gluteraldhyde prepared autologus pericardium, after vertical superior vena caval incision at the mouth of the anomalous pulmonary veins. Two