Importance of NT-proBNP in monitoring acute rheumatic carditis

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Introduction: To detect the correlation of N-terminal Pro Brain natriuretic peptide (NT-ProBNP) levels with clinical and laboratory findings by measuring them at diagnosis, during and after treatment in children with acute rheumatic carditis.

Methods: A total of forty children including 20 acute rheumatic carditis patients aged between 5 and 16 years and 20 healthy children as controls were included in the study. Blood was drawn from patients at diagnosis and in the first week, first month and third month after treatment in order to detect proBNP, C-reactive protein levels and erythrocyte sedimentation rates. All patients underwent echocardiography.

Results: The NT-ProBNP levels of children with acute rheumatic carditis were significantly higher than those of the control group at diagnosis and in the first week of treatment (p<0.05). Echocardiographic evaluation of acute rheumatic carditis patients revealed that left atrium diameter continued to decrease during the study and that mean left atrium diameters measured at diagnosis and in the 1st week were statistically higher than the mean left atrium diameters measured in the 3rd month. There was no correlation between left atrium diameters at diagnosis and in the 1st week, 1st month and 3rd month and NT-ProBNP levels during the same periods in the patient group.

Conclusions: Although increased serum NT-proBNP levels acted as a marker of cardiac inflammation in patients with acute rheumatic carditis in this study, this increase was not correlated with enlargement in the left atrium. NT-proBNP levels were found to be a valuable determinant indicating cardiac inflammation and hemodynamics.