Correlation of anti-cardiolipin antibodies with right ventricular systolic strain in systemic lupus erythematosus patients

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Abstract:

Introduction: The association between anticardiolipin antibodies (aCL) and cardiac disease in the presence of systemic lupus erythematosus (SLE) has been reported in various clinical trials. However, the correlation between these auto-antibodies and right ventricular (RV) function has been inadequately investigated. Objective: The present study investigated the possible correlation of the plasma anticardiolipin antibodies, as a marker of autoimmune phenomenon, with RV functions, assessed by right ventricular speckle tracking, in patients with systemic lupus erythematosus independent of significant pulmonary hypertension, systolic dysfunction or valvular disease. Methods: Forty-six SLE patients and 20 healthy controls were enrolled in our study and submitted thorough history, complete clinical examination then clinical scoring according to SLEDAI-2K score and then laboratory investigations particularly plasma anticardiolipin Ig_G or Ig_M antibodies. Then echocardiography was done to assess cardiac dimensions, left ventricular systolic functions, right ventricular functions and lastly speckle tracking for assessment of the right ventricular systolic strain. Results: Most of the study patients were young adult females with long-standing SLE (mean = 26 ± 3.1). All study patients had a high clinical SLE score (>6). All patients were normotensives and non-diabetics. No significant correlation was found between anticardiolipin titre and left ventricular dimensions or systolic functions. Significant negative correlation was found between RV strain and plasma level of both anticardiolipin Ig_M and Ig_G. Conclusion: The present study identified that with the use of 2D speckle tracking in patients with SLE, right ventricular systolic function was significantly diminished with rising plasma titre of autoimmune (Ig_G or Ig_M) antibodies independent of cardiovascular risk factors.

Keywords:

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