

عنوان مقاله:

Evaluation of Right Ventricular Function by Tissue Doppler Echocardiography in Asthmatic Children

محل انتشار:

مجله بین المللی کودکان، دوره 4، شماره 11 (سال: 1395)

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خلاصه مقاله:

Background Asthma is the most chronic inflammatory disorder of the airways in children and asthmatic patients can experience cardiac dysfunction, pulmonary hypertension and finally cor pulmonale later in life. We aimed to investigate Right Ventricular (RV) functions in asthmatic children by conventional and tissue Doppler echocardiography (TDE). Materials and Methods Pulmonary function tests, conventional and TDE examinations were performed on 42 asthmatic and 42 age- and gender matched healthy controls subjects (n=42). Results Compared with healthy children the RV wall was statistically thicker among asthmatic patients (P= 0.01). Conventional echocardiography had not significant difference between cases and controls, but TDE had significant difference between these two groups. Peak E' velocity, A' velocity, E'/A' ratio and S' in lateral and medial sites of tricuspid annulus valve, were significantly differ from control group in our patients (P<0.01). Isovolemic relaxation time and isovolemic contraction time were higher in asthmatic patients than the controls (P<0.01). Tie index or Myocardial performance index (MPI) had higher value in asthmatic patients (P<0.01). There was no difference in deceleration time between patients and cases (P=0.12). Conclusion Our study showed that although the conventional echocardiography and clinical finding were apparently normal in asthmatic children, TDE could showed subclinical dysfunction of the right ventricle in these patients. Our findings signify the diagnostic value of tissue Doppler-echocardiography superior to conventional echocardiography for the early evaluation, detection and monitoring of ventricular dysfunction among asthmatic patients.

کلمات کلیدی:

Asthma, Children, Right ventricular function, Tissue Doppler Echocardiography

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