

عنوان مقاله:

Cardiac Involvement in Mild Cystic Fibrosis Lung Involvement Assessed by Tissue-Doppler Echocardiography

محل انتشار:

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خلاصه مقاله:

Background: Cystic Fibrosis (CF) is a systemic disease affecting extra pulmonary dysfunction as a result of CF-related lung disease. Because of lack of enough studies in this field and utilization of TDE in this field, we aimed to evaluate the cardiac involvement in children with CF and compare it with healthy children. **Materials and Methods:** In this cross sectional study, children diagnosed with cystic fibrosis aged less than 15 years who referred to Emam Hossein Children's Hospital, affiliated to Isfahan University of Medical Sciences, Iran, during 2018, were enrolled. Participants were 2 groups: case and control. In this study 27 children with mild cystic fibrosis lung disease and 27 healthy children were evaluated. Case groups were consisted of children with CF, and control group were healthy children. FEV1, FVC, and FEV1 / FVC of all participants were recorded based on their spirometry findings. Cardiac function tests including electrocardiogram and Doppler echocardiography were evaluated by an expert pediatric cardiologist. Spirometry and Doppler echocardiography findings in two studied groups were compared. **Results:** Lateral wall tissue Doppler echocardiographic evaluation, annular peak velocity during systole and E'/A' ratio was significantly higher in children with CF than healthy children ($P<0.05$). In the right ventricle (septal wall) tissue Doppler echocardiographic evaluation peak velocity during early diastole, peak velocity during late diastole and annular peak velocity during systole was significantly higher in healthy children than those with CF ($P<0.01$). E'/A' ratio in the right ventricle (septal wall) tissue Doppler echocardiographic evaluation was significantly higher in children with CF than healthy children ($P<0.01$). **Conclusion** Based on the results, it is recommended to consider tissue Doppler echocardiography in the earlier period of CF patients' follow- up program

کلمات کلیدی:

Children, Cystic fibrosis, Spirometry, Tissue Doppler Echocardiography

