

Summary

Aim: The author investigated the utility of strain, strain rate, and tissue Doppler imaging (TDI) for the evaluation of the right ventricle (RV) impairment in patients with a hypertrophic cardiomyopathy (HCM) after a successful alcohol septal ablation without RV hypertrophy in comparison with control group.

Methods and Results: A group of 19 patients suffering from HCM with 22 controls was compared. The parameters of TDI were evaluated in mitral and tricuspid annulus. Strain and strain rate derived from TDI were assessed in an apical free wall of RV, as well as in basal segments of the left ventricle. Between both groups, there were statistically significant differences only in isovolumic pre-ejection time (79.2 ± 17.3 ms vs 58.5 ± 8.1 ms, $p < 0.01$), isovolumic relaxation time (104.7 ± 26.2 ms vs 77.3 ± 24.5 ms, $p < 0.01$), myocardial performance (Tei) index measured from TDI (0.61 ± 0.14 vs 0.49 ± 0.09 , $p < 0.01$), and early peak diastolic velocity of TDI (11.2 ± 1.8 cm/s vs 12.9 ± 2.6 cm/s; $p < 0.05$).

Conclusion: The results suggest the impairment of both systolic and diastolic RV function in patients suffering from HCM. TDI-related parameters appear more sensitive than strain and strain rate for evaluation.