Prošireni sažetak / Extended abstract

Systolic and diastolic left ventricular function in patients on dialysis

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Background: Cardiovascular diseases are the greatest cause of morbidity and mortality in patients with chronic renal insufficiency. Prevalence rate of heart failure in patients with terminal renal insufficiency treated with dialysis ranges from 18% to 45%. Prevalence rate of symptomatic heart failure in the general population of European countries is estimated to be about 4%. Diastolic dysfunction is a cause of heart failure in 33-50% of cases. In the general population, it is considered that 30-40% of patients suffering from primary diastolic cardiac dysfunction due to disorders in relaxation or ventricular extensibility. Echocardiography is a sensitive non-invasive method for detecting disorders of systolic and diastolic function of the left ventricle.

Aim: Evaluate the systolic and diastolic left ventricular function in patients in dialysis. Determine the incidence rate of systolic and diastolic left ventricular dysfunction in patients on dialysis.

Patients and Methods: A prospective study was conducted that included 50 patients who were treated with chronic dialysis (hemodialysis and continuous ambulatory peritoneal hemodialysis). All the patients underwent ultrasound examination of the heart on the ultrasonic unit Vivid 3 Vingmed Tehnology. Left ventricular systolic function was evaluated on the basis of ejection fraction (EF), which we detected in M-mode according to Teichholz method. Evaluation of diastolic function the left heart chambers is done on the basis of Doppler echocardiographic transmitral flow.

Results: The study included 50 patients: 22 males (44%) and 28 women (56%). 35 patients (70%) were treated with hemodialysis, and 15 patients (30%), continuous ambulatory peritoneal dialysis (CAPD). The average age of the patients was 47.33 ±12.74 years. The average duration of dialysis treatment was 42.6 ±17.2 months. Preserved systolic function of the left ventricle was recorded in 83% subjects. Weakened systolic function of the left ventricle was recorded in 17% subjects with average ejection fraction (EF 40%). Diastolic dysfunction of the heart's left ventricle was verified in 20.4% of patients. All the patients with diastolic dysfunction of the left heart chambers had preserved systolic function of the heart's left ventricle (regular ejection fraction).

Conclusion: The incidence of systolic and diastolic dysfunction of the heart's the left ventricle in patients on dialysis is high.

KEYWORDS: systolic function, diastolic function, dialysis.

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