

EVALUATION OF VENTRICULAR FUNCTION AFTER ARTERIAL SWITCH OPERATION WITH TISSUE DOPPLER ECHOCARDIOGRAPHY

B. Varan¹, K. Tokel¹, M. Kervancioglu¹, S.V Yildirim¹, N. Gunal¹, S. Mercan², S. Aslamaci²
¹*Department of Pediatric Cardiology* ²*Department of Cardiovascular Surgery, Baskent University,*
Ankara, Turkey
birgulv@hotmail.com

Objective: To evaluate the intermediate-term ventricular function of patients after arterial switch operation (ASO) with Doppler tissue imaging (DTI) and conventional methods.

Patients and Methods: 30 patients with transposition of the great arteries who underwent ASO and 24 healthy controls were evaluated by 2-D, color, CW Doppler and DTI for assessment of systolic, diastolic function and myocardial velocities. The age at operation changed between 3 to 120 days (30±5.4). Mean age at follow up was 15.48±13.2 months and the mean follow up period was 14.1±2.6 months.

Results: M-Mode echocardiography showed normal left ventricular function except in five patients. Mitral E and A velocities were compatible with normal diastolic function but isovolemic relaxation time was longer than the control group. The peak systolic and early diastolic myocardial velocities in basal part of the left ventricle were not different significantly from the control group. In two patients early relaxation velocities were more than 2 SD lower than the mean of the control group. Late relaxation velocities of the left ventricle were lower in patients than the control group. The myocardial velocities of the right ventricle and interventricular septum were lower than the control group.

Conclusion: After ASO, DTI may define subclinical abnormalities in myocardial function. The lower contraction and relaxation velocities of the right ventricle showed that the right ventricular function should also be studied more extensively after the operation.

