Echocardiographic Evaluation of Cardiac Findings in Infants of Mothers with Gestational Diabetes Mellitus

Aim: Echocardiographic evaluation of cardiac findings in infants of mothers with gestational diabetes mellitus (GDM).

Materials and Methods: In this study, echocardiographic evaluation of the 70 infants born to mothers with GDM and 70 control group was conducted retrospectively in the first 24 hours of their lives.

Results: Infants born to mothers with GDM and control group respectively, interventricular septum (IVS) end-diastolic thickness was found 6.1 ± 1.0 mm; 4.6 ± 0.6 mm (P < 0.001); end-systolic thickness was found 7.4 ± 1.7 mm; 6.7 ± 1.1 mm (P = 0.006); right ventricular isovolumetric contraction time (IVCT) was found 28.6 ± 4.8 ms; 27.1 ± 4.4 ms (P = 0.048); and ejection time (ET) was found 21.8 ± 2.1 ms; 21.9 ± 1.7 ms (P = 0.021); myocardial performance index (MPI) was found 0.37 ± 0.08; 0.31 ± 0.05 (P < 0.001); the ratio of early and late diastolic flow peak flow velocity values in tissue doppler imaging (TDI E/A) was found 77 ± 0.13; 0.81 ± 0.11 (P = 0.032); left ventricular isovolumetric relaxation time (IVRT) was found 41.9 ± 4.6 ms; 39.5 ± 5.6 ms (P = 0.007); and MPI was found 0.45 ± 0.09; 0.39 ± 0.06 (P < 0.001).

Conclusion: The infants born to mothers with GDM in the first 24 hours of life, IVS was detected thicker, TDI E/A was detected lower, ET was detected longer in the right ventricle, right ventricular IVCT and left ventricular IVRT value were detected higher, MPI was detected higher in both ventricles.

Evaluation of the Use of Pulse Oximetry and Combined with Clinical Assessment in the Early Detection of Critical and Severe Congenital Heart Disease in Term Neonates in the First Four Days After Birth

Objectives: To study the structural-functional parameters of the heart in children at different stages of CKD according to echocardiography (EchoCG).

Material and Methods: 104 patients with CKD were examined. The CKD stage was determined based on the estimated glomerular filtration rate. The first group consisted of 63 patients with CKD stage I, the second group included 26 patients with CKD stage III, and the third group of 15 patients with CKD stage V. Control group included 33 healthy children. All children performed echocardiography.

Results: According to the results of the One-Way ANOVA test, the echocardiographic parameters differed significantly in the studied patients depending on the presence and stage of CKD (p<0.05 for all parameters). In general, with the progression