Summary. The article presents the published data on the prevalence, the main clinical manifestations, modern methods of early neonatal and postnatal diagnosis, treatment and prognosis by ventricular septal defect – the congenital malformation of cardiovascular system. According to International Statistical Classification of Diseases of the 10 revision, the following is defined: Q21.0 Ventricular septal defect.

Frequency of the malformation. Ventricular septal defect – is the most common malformation of cardiovascular system, accounting for 20% of congenital heart disease.

Interaction with other defects. Ventricular septal defect can be observed under different chromosome aberrations and congenital syndromes.

Early neonatal and postnatal diagnostics. After birth in patients with a large ventricular septal defect, the pulmonary vascular resistance may remain higher than normal, and thus the size of the left-to-right shunt may initially be limited. As pulmonary vascular resistance continues to fall in the 1st few weeks after birth because of the normal involution of the media of small pulmonary arterioles the size of the left-to-right shunt increases. With continued exposure of the pulmonary vascular bed to high systolic pressure and high flow, pulmonary vascular obstructive disease develops. When the ratio of pulmonary to systemic resistance approaches 1:1, the shunt becomes bidirectional, signs of heart failure abate, and patient becomes cyanotic (Eisenmenger’s syndrome). If the shunt is large, left atrial and ventricular volume overload occurs, as does right ventricular and pulmonary arterial hypertension. The main pulmonary artery, left ventricle, left atrium are enlarged.

Clinical manifestation of the malformation in patients with ventricular septal defect varies according to the size of the defect and the pulmonary blood flow and pressure. Large ventricular septal defect with excessive pulmonary blood flow and pulmonary hypertension are responsible for dyspnea, feeding
difficulties, poor growth, profuse respiration, recurrent pulmonary infections, and cardiac failure in early infancy.

Cyanosis is usually absent, but duskiness is sometimes noted during crying. Prominence of the left precordium is common, as are a palpable parasternal lift, a laterally displaced apical impulse and apical thrust, and a systolic thrill. The holosystolic murmur of a large ventricular septal defect is usually less harsh than that of a small ventricular septal defect. The pulmonic component of the 2\textsuperscript{nd} heart sound may be increased, indicating pulmonary hypertension.

In large ventricular septal defect, the chest roentgenograms reveal gross cardiomegaly with prominence of both ventricles, the left atrium, and pulmonary artery. The pulmonary vascular markings are increased.

The electrocardiogram shows biventricular hypertrophy, P waves may be notched or peaked. The echocardiography shows the position and size of the ventricular septal defect, the degree of volume overload of the left atrium, left and right ventricles.

**Treatment.** Indications for surgical correction of ventricular septal defect include patients at any age with large defects in whom clinical symptoms and failure to thrive cannot be controlled medically.

**Prognosis** The natural course of a ventricular septal defect depends to a large degree on the size of the defect. A significant number of small defects close spontaneously, most frequently during the 1\textsuperscript{st} 2 years of life.