Interventional treatment of postsurgical Gerbode-type defect.

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Introduction. The communication between the left ventricle and right atrium, known as Gerbode type defect, is rare cardiac anomaly. There is increasing number of adult patients with postsurgical defects after mitral or aortic valves replacement. The traditional method of treatment is surgical closure of defect.

Material and Method. A 11-year-old male was referred for increasing deterioration of physical activity. He was born with congenital cardiac anomaly: d-transposition of the great arteries, interventricular defect and severe subpulmonary stenosis. At 21 months of age, he underwent Rastelli operation. After 6 years next corrective operation was performed due to increasing stenosis in the right and left ventricle outlet tracts. Two years later he was admitted to our hospital again due to mild deterioration of physical capacity and the incidences of supraventricular arrhythmias. The left ventricle to the right atrium shunt with a defect measuring 5.5 mm was diagnosed. Cardiac catheterization was performed to evaluate the hemodynamic state with intention of percutaneous therapy. A pulmonary to systemic blood flow ratio was 1.9:1.0. We decided to implant Amplatzer Duct Occluder II 6-4. Unfortunately after placing the device in the defect both angiography and echocardiography revealed significant shunt through the implant. Therefore the implant was removed and Amplatzer Duct Occluder 10/8 (9-PDA-006, St Jude) was introduced from the right femoral vein successfully during the same procedure.

Results. The retention skirt was placed just below aortic valve and the right sided part of implant did not interfere with tricuspid valve. Both echocardiography and ventriculography showed good position of the device with minimal residual shunt. No arrhythmia or conduction disturbances were noted during whole procedure. At follow-up the patient remains free of symptoms. At the beginning the small residual leak was observed but at the last follow-up it disappeared completely.

Conclusion. The development of cardiac surgery is associated with the formation of various complications. Each subsequent surgical correction increases the operational risk. Percutaneous treatment of iatrogenic Gerbode type defects is an attractive and feasible method of treatment.