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Perventricular closing of defects of an inter-ventricular septum in pediatric group (less than one year old)

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Purpose: To present results of perventricular closing of defects of an interventricular partition with occluder of various types in pediatric group.

Materials & Methods: In the Department of Surgery of Congenital Heart Diseases of the Federal Center of Cardiovascular Surgery, Astrakhan from 2014 to 2017 were operated 50 patients with VSD with use of a method of perventricular closing of defect without use of artificial blood circulation under control of TEE echo. Ages of patients were from 2.1 to 11.8 months \pm 8.6. Body weight is from 3.9 to 9.8 kg \pm 8.4. Defects size from 4.5 to 8.5 mm with localization: Subaortal - 17 (34%) cases, in aneurism - 10 (20%) cases, subtricuspidal - 16 (32%) cases, muscular - 7 (14%) cases. The Qp/Qs index was from 1.6 to 2.5 and size of occlude is from 5 to 9 mm. CHF of patients of the I-IIb FC on NYHA.

Results: Successful closing of VSD is reached in 94%. Duration of procedure was from 29 to 68 minutes (on average 40 minutes) were used occluders SQFDQ-II (symmetric) - 32 (64%), SQFDQ-IV (asymmetric) - 11 (22%), SQFDQ-I (muscular) - 7 (14%). Frequency of conversion is 3 (6%); it is connected with underestimation of the sizes and localizations of defect. Blood loss is about 0.6-4.3 ml/kg \pm 1.1. Intraoperative echo the shunt from 1 to 2 mm in 12 patients (24%), freedom from shunts in 3 months in 90%, the tricuspid, aortic and mitral regurgitation did not exceed 0-1 degrees. Mean duration of mechanical ventilation was 238.6 \pm 160.5 minutes. Mean hospital stay was 6.73 \pm 2 days. Cardiotonics applied 4 patients with pulmonary hypertension. There were no intraoperative rhythm disorders. One patient has late complete atrioventricular block two month after operation with implanted pacemaker.

Conclusion: The technology of perventricular closing of VSD provides good cosmetic effect, fast rehabilitation of patients, takes a certain place in surgical treatment of VSD along with traditional techniques (with use of artificial circulation, transcatheter closure).

Biography

Barkov Ivan is a Cardiac Surgeon of the Children's Department of the FSBE (The Federal Center of Cardiovascular Surgery) of the Russian Ministry of Health. Astrakhan. He was the Resident in Cardiovascular Surgery from 2009-2011. His interests include pediatric cardiosurgery and minimally invasive methods of correction congenital heart diseases.

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