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Thoracoscopic radiofrequency ablation of the pulmonary veins in treatment of the isolated atrial fibrillation. First experience in Kazakhstan

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The aim of the study was to evaluate the mid-term results of the thoracoscopic radiofrequency ablation of the pulmonary veins in treatment of the isolated atrial fibrillation.

Methods: Since May 2015 in National Scientific Center of Surgery named after A.N. Syzganov, 25 patients with persistent and long-standing persistent atrial fibrillation underwent the thoracoscopic radiofrequency ablation of the pulmonary veins (Cardioblate Gemini-s iRF). The surgical procedure included ablation of the pulmonary veins, coagulation of the Marshall's ligament, cutting of left atrial appendage and performing of the epicardial mapping to estimate conduction block. Contraindications for procedure were: left atrial appendage thrombosis, adhesion in pericardial cavity (previous open heart surgery), an adhesive process in the pleural cavities (pneumonia, pleuritis), moderate or severe COPD.

There were totally 25 patients, 18 males and 7 females, the mean age was 59 years (33-74 years), 7 patients with persistent AF, 18 patients with long-standing persisting form of AF, the mean duration of AF was 4.2 years (3 months, 20 years), the mean size of the left atrium was 4.4 ± 0.9 cm, 10 patients were after catheter ablation, LV EF was 54% (36-67%), 6 patients had a mitral valve regurgitation of the 1-2 degree, mean LVEDV 165 (101-224) ml. In 21 patients cutting of left atrial appendage was performed using surgical stapler.

Postoperative amiodorone and warfarin were administered for 3 months. The efficacy of the treatment was estimated by means of cardiac monitor REVEAL XT, the mean follow-up time was 180 ± 19 days.

Results: All patients were on sinus rhythm after operation and at the time of discharge from hospital. One patient developed an atrial flutter (patient with cardiomyopathy, LV EF 36%) in 30 days after operation and radiofrequency ablation of the cavo-tricuspid isthmus was carried out, 2 patients developed atrial fibrillation in 1 and 6 months after surgical operation. There were no complications in postoperative period. During the follow up period 92% of patients were on sinus rhythm.

Conclusion: Thoracoscopic radiofrequency ablation of the pulmonary veins is a safe and effective method of a treatment of atrial fibrillation, especially in patients with large left atrium and ineffective previous catheter ablation.

Biography

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