Thoracoscopic Ablation for Atrial Fibrillation: Does Sinus Rhythm Self-Restoration During Ablation Increase Success Rates?

Victor Vaykin, Dmitriy Zhiltsov, Mikhail Ryazanov, George Bolshukhin.

B. A. Korolev Specialized Clinical Cardiac Surgery Hospital, Nizhny Novgorod, Russian Federation.

Objective

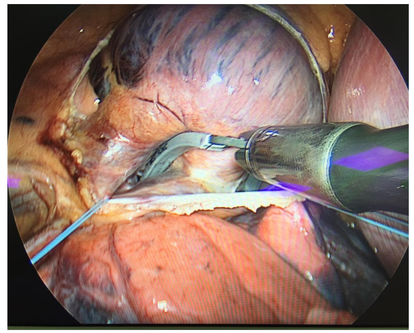
The number of thoracoscopic ablations is steadily increasing. The aim of the study was to investigate the effectiveness and safety of thoracoscopic radiofrequency ablation for different forms of atrial fibrillation and evaluate whether independent recovery of sinus rhythm during ablation affects the effectiveness of the operation in the long-term period

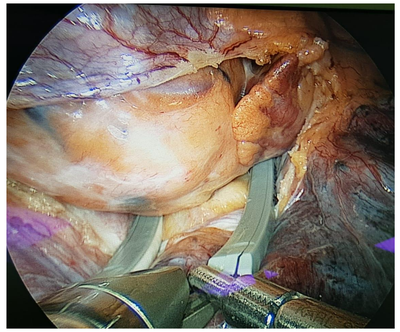
Methods

106 patients who underwent thoracoscopic ablation from 2015 to 2020 were analyzed. They were divided into 2 groups: group 1 (n=74) included patients with persistent and long-standing AF, the second group (n=32) included patients who had paroxysmal AF.

Patients' characteristics	Persistent (74)	Paroxysmal (32)
Age	54,2	61,3
Previous catheter ablation	11 (14,9%)	23 (71,9%)
Male/Female	61/13	25/7
BMI	30,0	31,2
Left Atrium	58/67 mm	52/64 mm

Every procedure included bilateral pulmonary vein isolation





For the first 3 months, patients received antiarrhythmic and anticoagulant therapy. In the absence of the recurrence of atrial fibrillation, antiarrhythmic therapy was canceled. After six months, anticoagulant therapy was also canceled. 24-Holter ECG monitoring was performed after 3, 6, and 12 months and annually thereafter. The average follow-up period was 21.5 months.

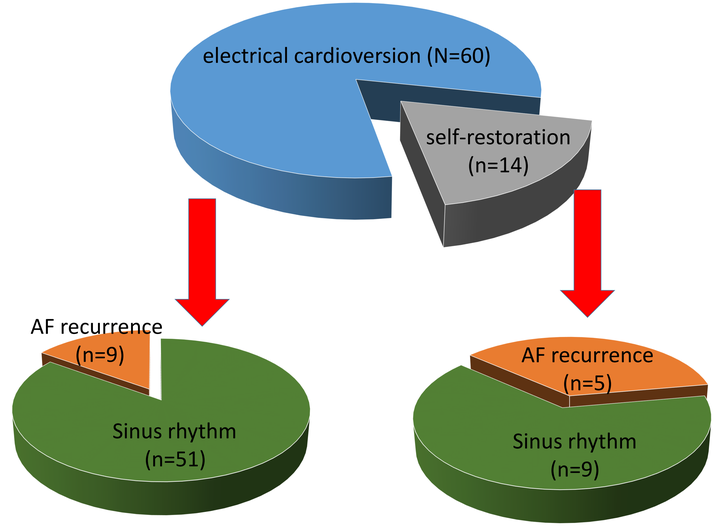
Results

In the immediate postoperative period, all patients maintained a sinus rhythm. Subsequently, the total number of arrhythmia recurrences was 16 cases: 14 in the persistent group and 2 cases in the paroxysmal group.

Among the most significant complications are

- 2 cases of sinoatrial block that required pacemaker implantation
- 1 relaxation of the right dome of the diaphragm
- 18 cases of atrial flutter, stopped by catheter ablation of the cavatricuspid isthmus.

Results



Conclusions

- ❖ The effectiveness of thoracoscopic ablation is 85% in our center. The number of complications is small and they did not significantly affect the rehabilitation of patients.
- ❖ Self-restoration of the sinus rhythm during ablation is not a predictor of the effectiveness of the operation. A third of patients in this group had a recurrence of AF.
- ❖ Although our study revealed a negative impact of this indicator on long-term results, but we have only a small number of cases, to draw correct conclusions.