

Modified thoracoscopic ablation procedure for the treatment of AF

Amiran Sh. Revishvili, Vadim A. Popov, Egor S. Malyshenko, Maksim M. Anishchenko, Sirarpi S. Petrosyan, Magomed G. Gasangusenov

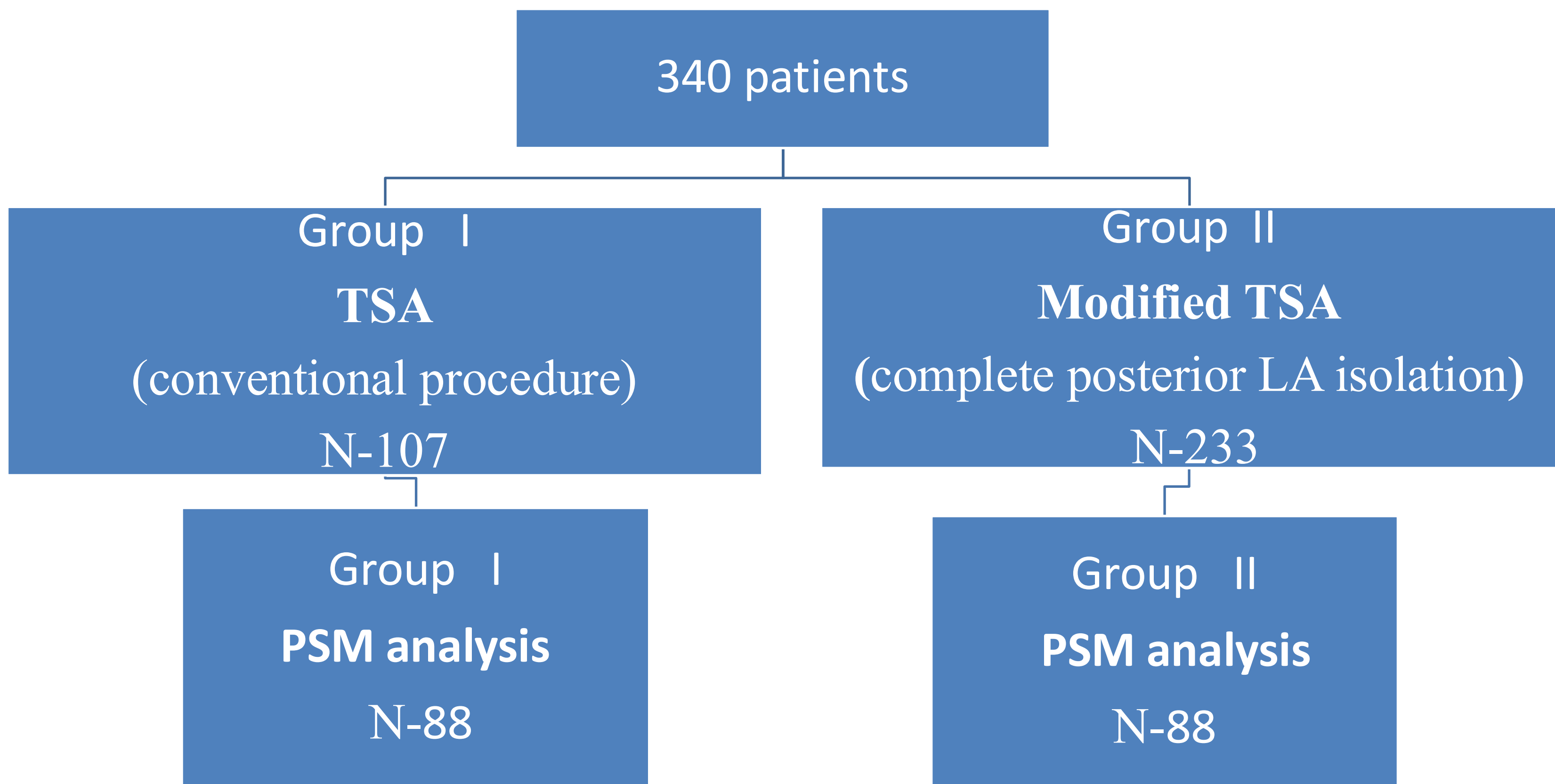
A.V. Vishnevsky National Medical Research Center of Surgery, Moscow, Russia

AIM

This study compared outcomes of a modified thoracoscopic ablation (TSA) procedure versus conventional TSA for the treatment of AF.

Materials and methods

Design of study



BASELINE CHARACTERISTICS

Parametrs	Before PSM (n=340)			After PSM (n=176)		
	Group I n=107	Group II n=233	P value	Group I n=88	Group II n=88	P value
Age	59,5±9,0	60,3±9,8	0,463	59,4±8,6	59,5±8,8	0,911
male, n(%)	77(72%)	155(65,5%)	0,317	61(69,3%)	61(69,3%)	1,00
female, n(%)	30(28,0%)	78(33,5%)	0,317	27(30,7%)	27(30,7%)	1,00
BMS, kg/м	29,5±3,2	29,4±3,8	0,866	29,6±3,1	29,4±3,3	0,686
Parox.AF, n(%)	35 (32,7%)	106 (45,5%)	0,038	31(35,2%)	33(37,5%)	0,754
Persist.AF, n(%)	21 (19,6%)	48(20,6%)	0,038	20(22,7%)	22(25,7%)	0,723
Long persist .AF, n(%)	51 (47,7%)	79 (33,9%)	0,038	37(42,1%)	33(37,5%)	0,537
RFA, 1 procedure , n(%)	27 (25,2%)	39(16,7%)	0,234	22(25%)	18(20,5%)	0,602
RFA, 2 procedure , n(%)	27 (25,2%)	39(16,7%)	0,234	4(4,5%)	8(9,1%)	0,602

Results

Parametrs	Group I n=107	Group II n=233	P value	Group I n=88	Group II n=88	P value
Rhythm at the beginning of the operation						
Sinus	34(33%)	98(41,8%)		31(35,2%)	36(40,9%)	
AF	69(67%)	133(57,3%)	0,193	57(64,8%)	52(59,1%)	0,438
AF/AT	0(0)	2(0,9%)		0(%)	0(%)	
Cardioversion at the end of the operation	53(51,5%)	118(50,9%)	1,00	43(48,3%)	53(60,2%)	0,172
AF persists after cardioversion	4(3,9%)	2(0,9%)	0,297	4(4,5%)	1(1,1%)	0,461
The rhythm was not disrupted intraoperatively.	12(13,7%)	26(11,2%)	0,297	11(12,5%)	8(9,1%)	0,634
Absence of recurrence of AF/AT during hospitalization	88(85,4%)	207(89,2%)	0,179	75(85,2%)	79(89,8%)	0,247
Rhythm failure in AF/AT, at the hospital stage	15(14,5%)	25(10,8%)	0,179	13(14,8%)	9(10,2%)	0,247

Follow –up (36 mo)

Surgical technique

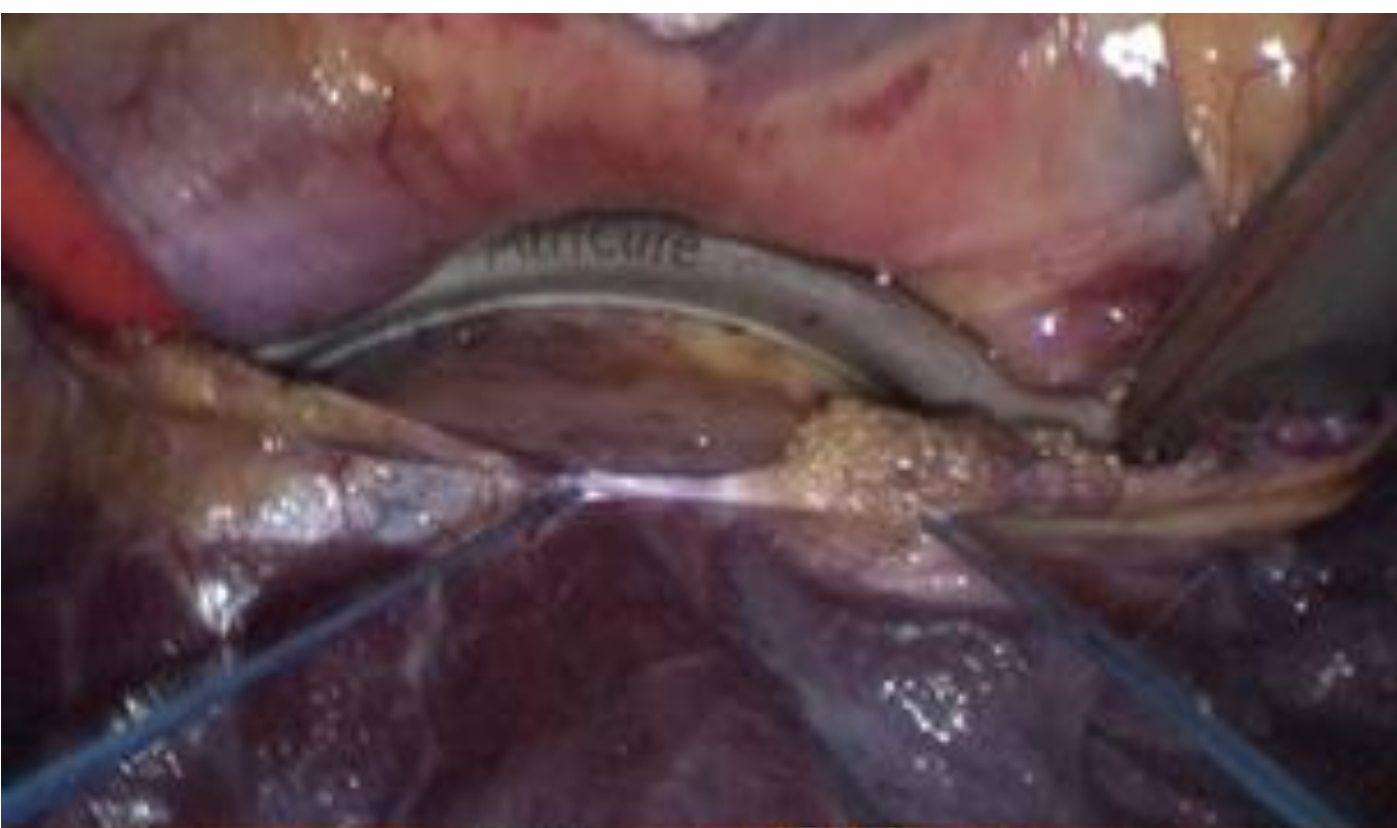
- Left-side PVI BOX - line posterior LA isolation

- Right-side PVI BOX - line posterior LA isolation

- Left-side LAA excision



left side PVI



right side PVI



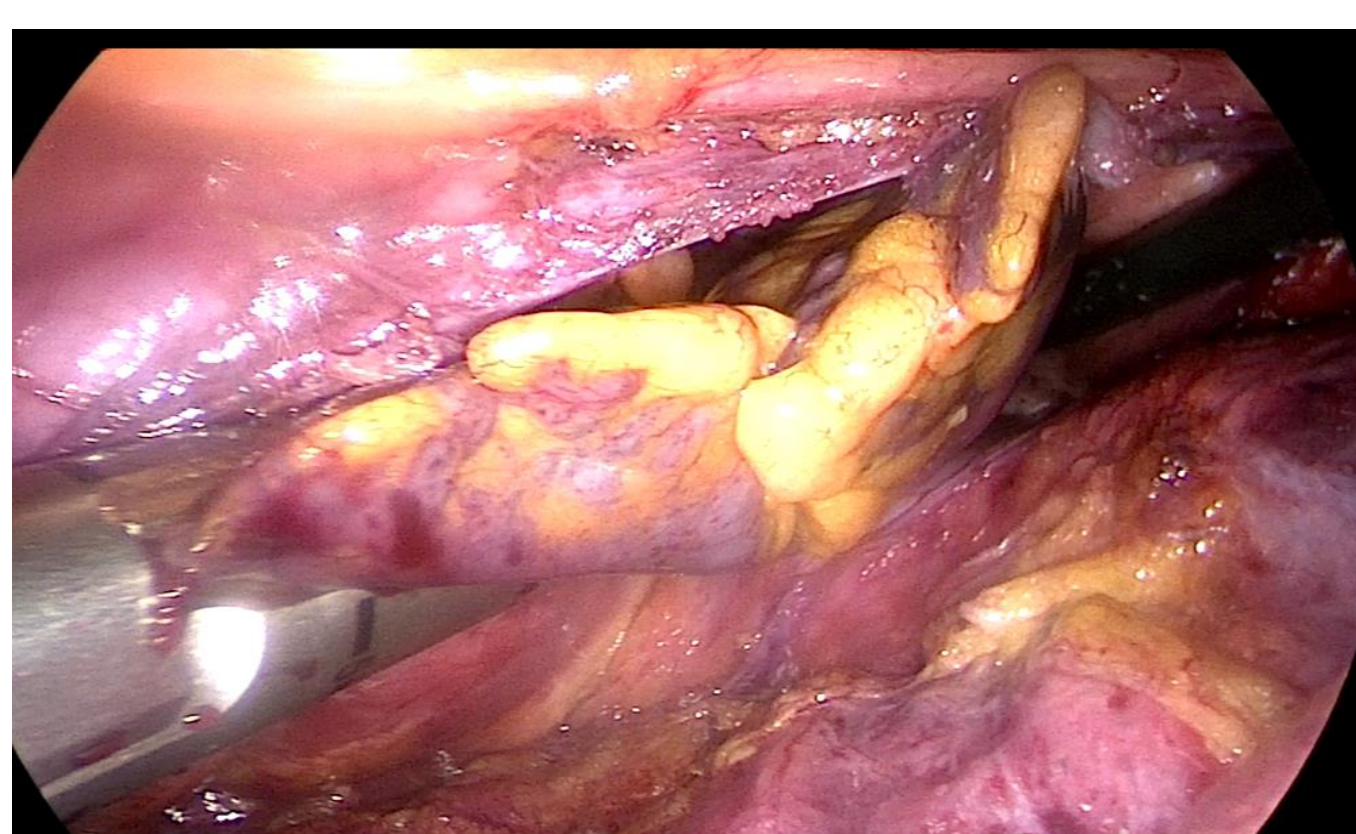
posterior LA isolation



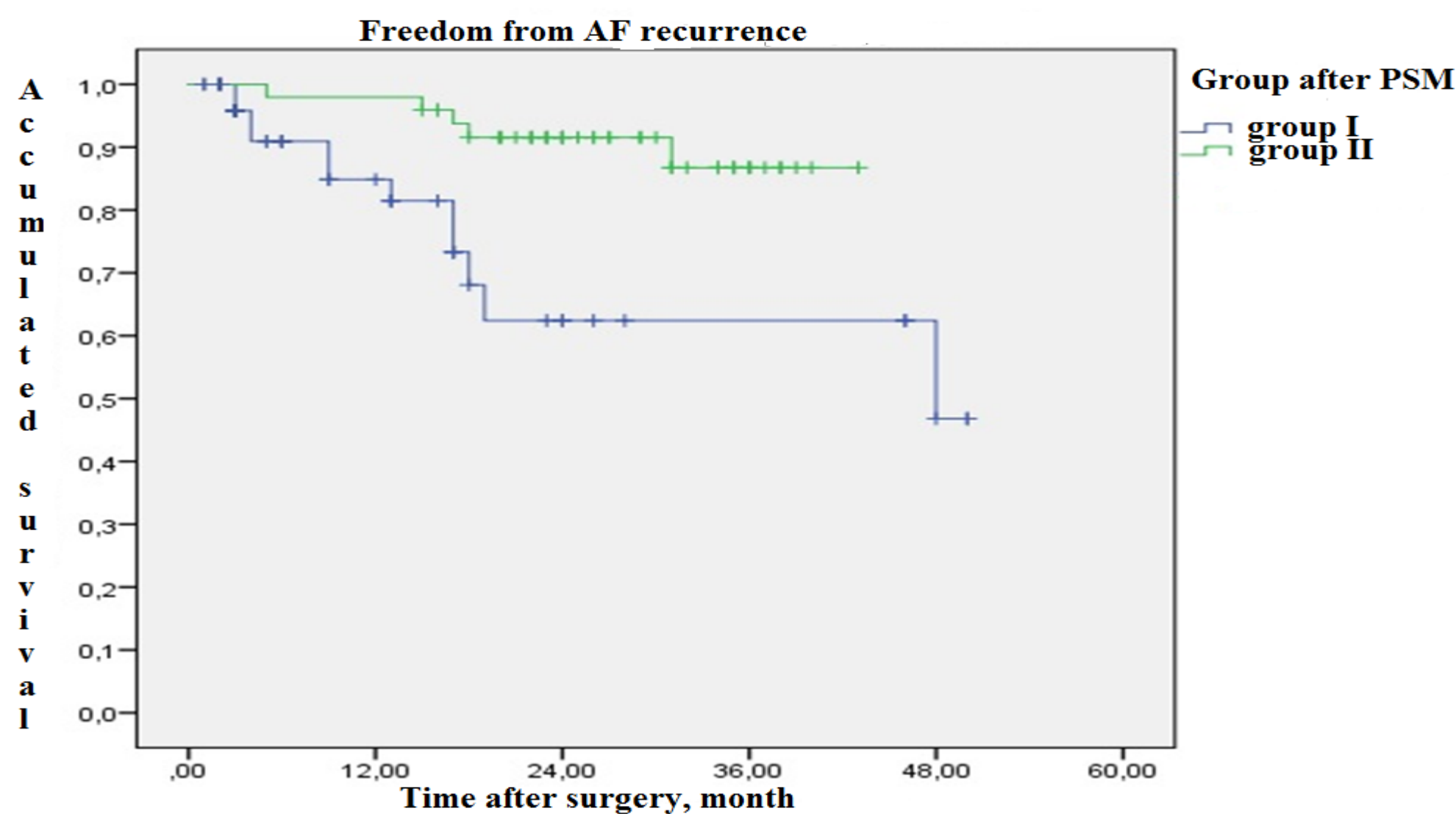
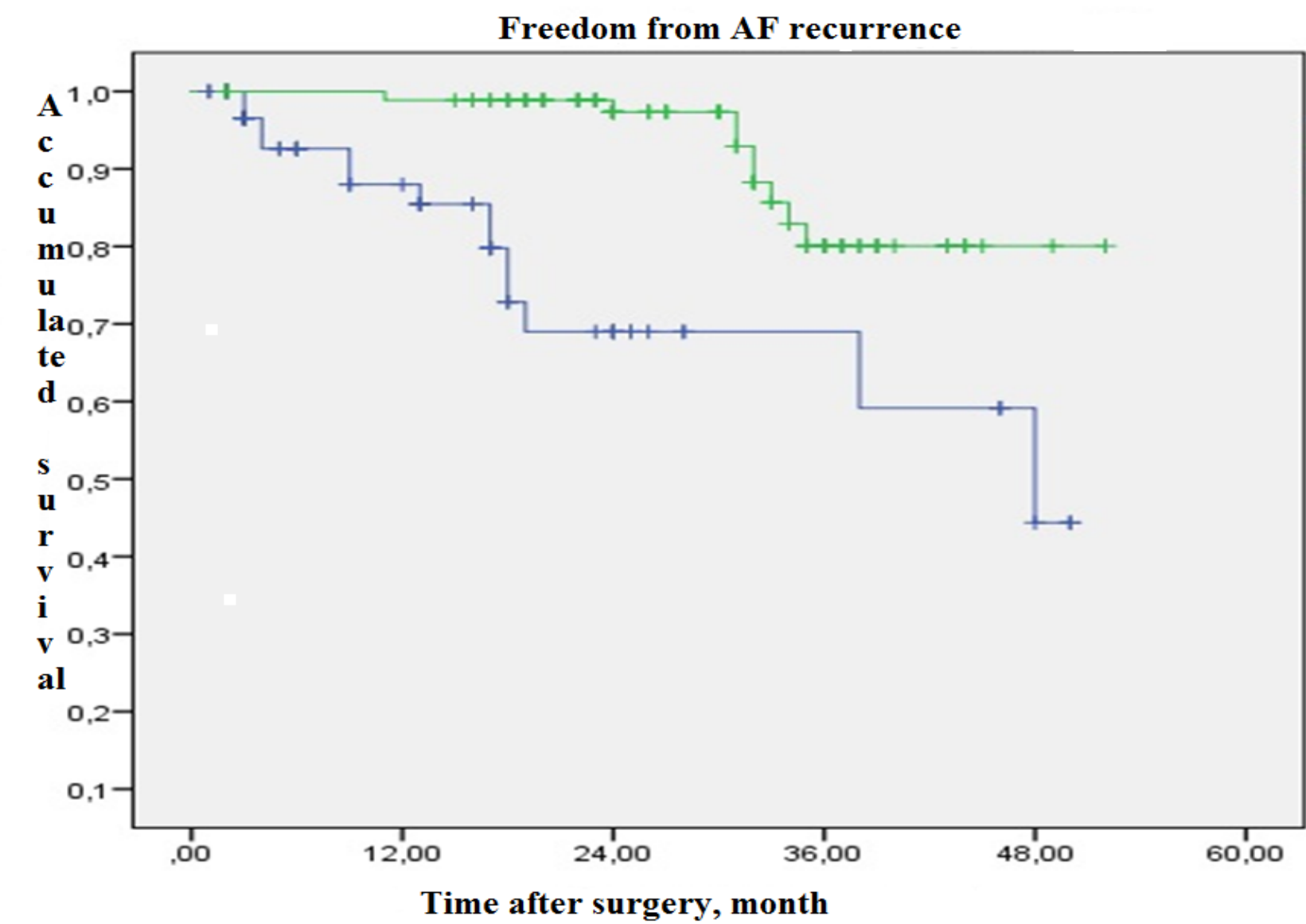
left side BOX - line



right side BOX - line



excision of the LAA



Curves of cumulative freedom from arrhythmia recurrence before (a) and after (b) PSM analysis

Conclusion

TSA is an effective and relatively safe treatment for isolated forms of AF. Modification of the technique with complete isolation of the posterior wall of the LA significantly improves the mid-term results.