



Concomitant Cryoablation For Atrial Fibrillation During Minimally Invasive Mitral Valve Surgery

Anastasiia Karadzha, Alexander Bogachev-Prokophiev, Ravil Sharifulin, Alexander Chernyavsky
E. Meshalkin National Medical Research Center, Novosibirsk, Russian Federation

Objective:

- The purpose of the study was to assess the safety and efficacy of concomitant cryoablation in patients scheduled for minimally invasive mitral valve surgery

Methods:

Single center retrospective study

2012-2020

Minimally invasive
Mitral valve surgery + cryoablation

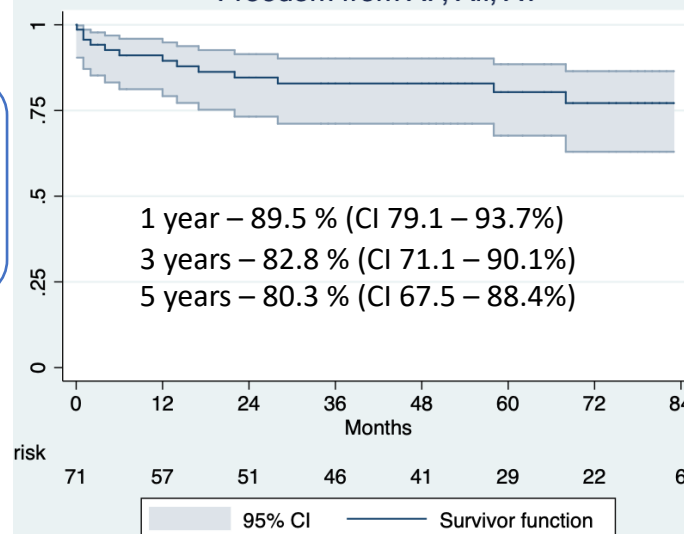
71

Early results

n = 71

Hospital mortality, n (%)	0
Re-exploration for bleeding, n (%)	4 (5.6)
Conversion of approach, n (%)	1 (1.4)
Cerebral ischemia events, n (%)	2 (2.8)
Superficial wound infection, n (%)	0
Lymphocele, n (%)	3 (4.2)
Early AF paroxysms, n (%)	11 (15.5)

Freedom from AF, Afl, AT



Results:

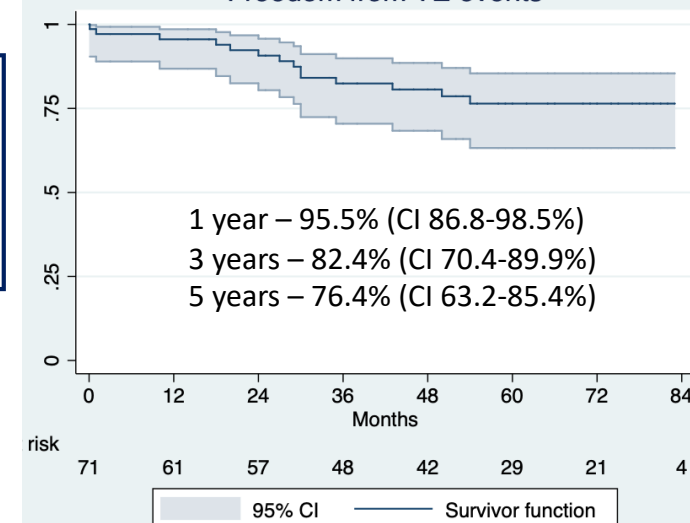
Rhythm control

24 hour Holter monitoring

- at discharge
- 3 months after surgery
- 6 months after surgery
- 12 months after surgery
- annually thereafter

Mean follow-up =
58.3±26.3 months

Freedom from TE events



Risk factor	Univariable model		Multivariable model	
	HR (95% CI)	P value	HR (95% CI)	P value
Age	1.09 (1.01-1.18)	0.028	1.01 (0.98-1.23)	0.107
Hypertension	2.83 (0.95-8.43)	0.062	1.62 (0.46-5.76)	0.456
Thyroid disorders	2.70 (0.83-8.79)	0.099	3.05 (0.75-12.31)	0.118
AF duration, months	1.01 (1.00-1.01)	0.146	1.01 (0.99-1.03)	0.048
Persistent AF	10.88 (1.41-84.05)	0.022	4.74 (0.55-40.58)	0.156
LA lesion set	0.30 (0.07-1.40)	0.126	0.40 (0.06-2.45)	0.319
Hospital AF paroxysms	6.21 (2.08-18.56)	0.001	3.95 (1.08-14.52)	0.039

Late death, n (%) 6 (8.5%)

Cardiac death, n (%) 5 (83.3)

- Stroke 2
- Myocardial infarction 2
- Progressive H 1

Non-cardiac death*, n (%) 1 (16.7%)

* Glioblastoma

Conclusions:

Concomitant cryoablation during minimally invasive mitral valve surgery is a safe and feasible procedure that demonstrates great results in sinus rhythm maintaining at mid-term follow-up.