

2024 대한심장혈관흉부외과학회 제56차 추계학술대회

2024. 10. 31 (Thu) - 11. 01 (Fri) 여수 엑스포 컨벤션센터

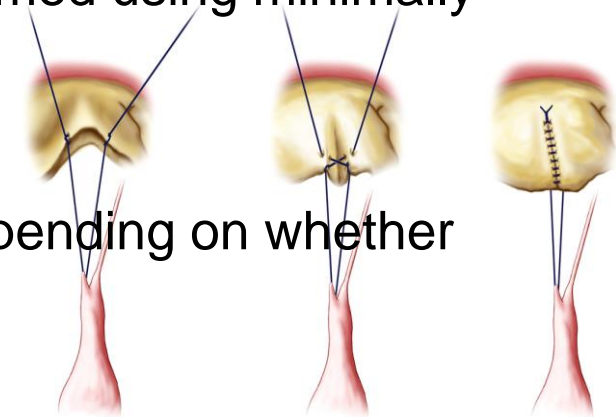


The mid-term outcomes of Neo-chordae folding plasty technique in minimally invasive mitral vavluoplasty

- Our center has been performing neo-chorda folding plasty (NCFP) technique for mitral valve repair surgery since 2013.
- The purpose of this study is to investigate the mid-term outcomes of NCFP in mitral valve repair via minimally invasive approach following a review of our 10-year experience.

Methods

- Between December 2008 and June 2024, 487 mitral valve repair were performed using minimally invasive approach via right anterolateral thoracotomy.
- We compared the perioperative results to evaluate the durability of NCFP depending on whether NCFP was performed.



Results : Demographic data

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	No folding plasty	Folding plasty	P-value
	(N=285, 58.5%)	(N=202 ,41.5%)	
Female	128 (44.9%)	74 (36.6%)	0.083
Age	56.3 ± 15.4	59.4 ± 14.0	0.021
Hypertension	155 (54.4%)	136 (67.3%)	0.006
Diabetes	48 (16.8%)	23 (11.4%)	0.220
Stroke	32 (11.3%)	24 (11.9%)	0.959
NYHA 3 or 4	128 (44.9%)	112 (55.4%)	0.028
Emergent operation	11 (3.9%)	1 (0.5%)	0.039
Euro Score II (%)	2.2 [1.2; 4.4]	1.6 [0.9; 4.1]	0.011
Ejection fraction (%)	62.5 ± 9.4	63.5 ± 8.6	0.254
MR Gr ≥ 3	247 (87.3%)	202 (100.0%)	< 0.001

Results: perioperative data

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	No NCFP	NCFP	P-value
	(N=285)	(N=202)	
Annuloplasty ring size (mm)	29.6 ± 2.7	29.1 ± 2.5	0.049
Concomitant surgery			
Surgical ablation	117 (41.1%)	72 (35.6%)	0.266
TV surgery	70 (24.6%)	23 (11.4%)	<0.001
others	35 (12.3%)	21 (10.4%)	0.618
CPB time (mins)	115.0 [92.0;143.0]	80.0 [67.0;97.0]	< 0.001
ACC time (mins)	77.0 [56.0;97.5]	53.0 [44.0;68.0]	< 0.001
Duration of ICU stay(hours)	24.0 [22.0;30.0]	24.0 [23.0;27.0]	0.459
OR extubation	157 (55.1%)	182 (90.1%)	< 0.001
Re-exploration	11 (3.9%)	3 (1.5%)	0.204
Early mortality (≤ 30days)	2 (0.7%)	1 (0.5%)	0.999
Overall mortality	33 (11.6%)	14 (6.9%)	0.120
Hospital stay (days)	6.0 [4.0; 8.0]	5.0 [4.0; 6.0]	< 0.001

Abbreviation: CPB; cardiopulmonary bypass/ ACC; aortic cross clamp/ OR; Operative room/ TV; Tricuspid valve

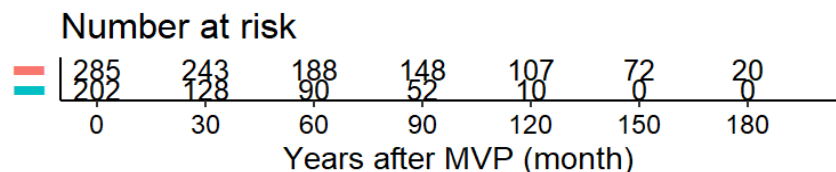
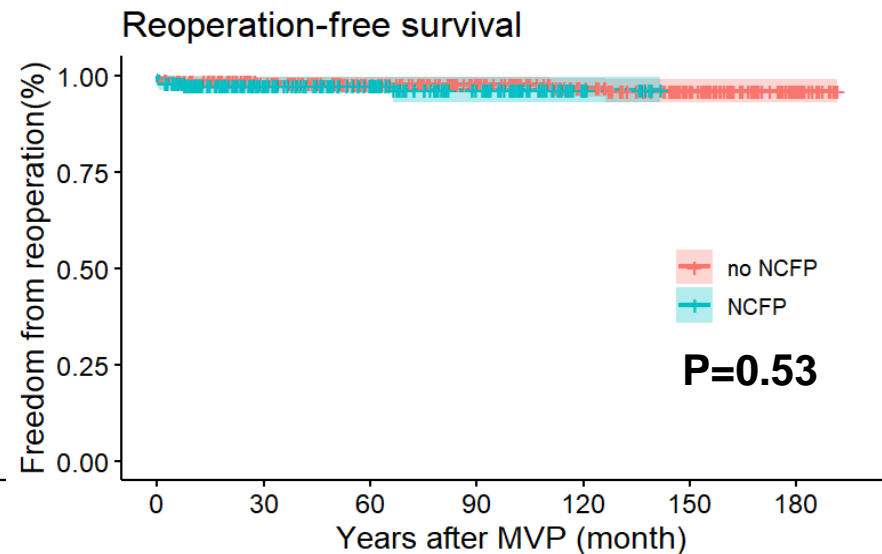
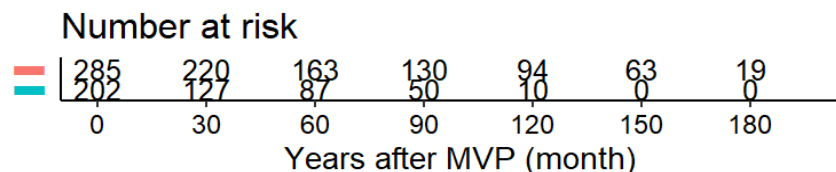
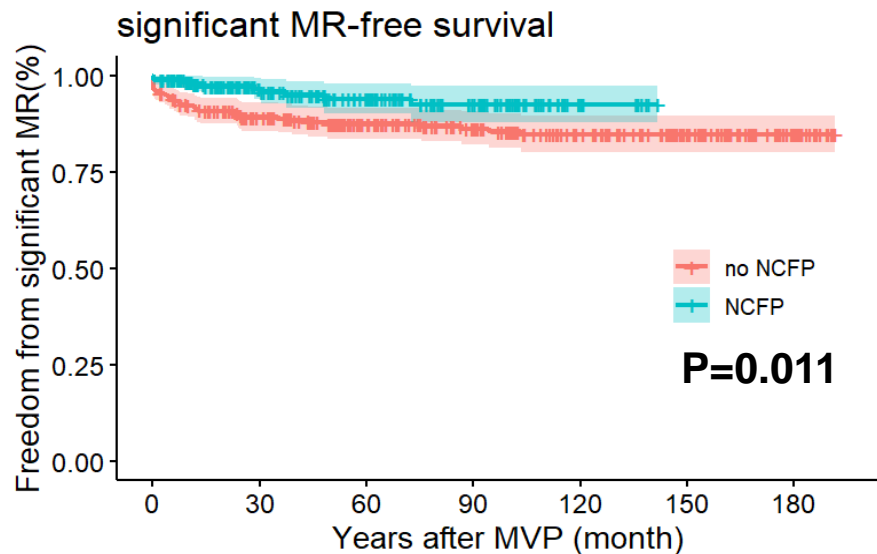


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Results: perioperative data

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	No NCFP (N=285)	NCFP (N=202)	P-value
Echo FU duration (months)	47.0 ± 96.1	32.0 ± 32.6	0.015
Last follow-up MR ≥ Gr 3	38 (13.3%)	10 (5.0%)	0.004
Survival duration (months)	85.5 ± 56.3	48.8 ± 38.4	< 0.001
Reoperation free survival	277 (97.2%)	196 (97.0%)	0.999



- The 10-year freedom from recurrent significant MR
 - no NCFP 92.6%
 - NCFP 84.7%
- The 10-year freedom from reoperation for MR
 - no NCFP 95.9%
 - NCFP 96.2%



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- The simplicity of the NCFP is helpful for reducing the time of cardiopulmonary bypass and aortic cross clamp, probably proceeding short duration of hospital stay.
- In our experience, the NCFP has durability and reliability in minimally invasive mitral valve repair.