

Safety and efficacy of Rechord system for easy adjustment of appropriate artificial chordae length in patients undergoing minimally invasive mitral repair

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Disclosure

All authors have no conflict of interest to disclose with respect to this presentation.

Background

Memo 3D /4D Rechord



- ✓ Additional temporary guiding system (yellow loops)
- ✓ Act as a reference point of the height of neo-chordae
- ✓ After suturing and tying the PTFE sutures, loops is removed.

There are tips and pitfalls in order to complete successful mitral valve repair.

Objective

We sought to evaluate safety and efficacy of this system as part of a minimally invasive right thoracotomy approach.

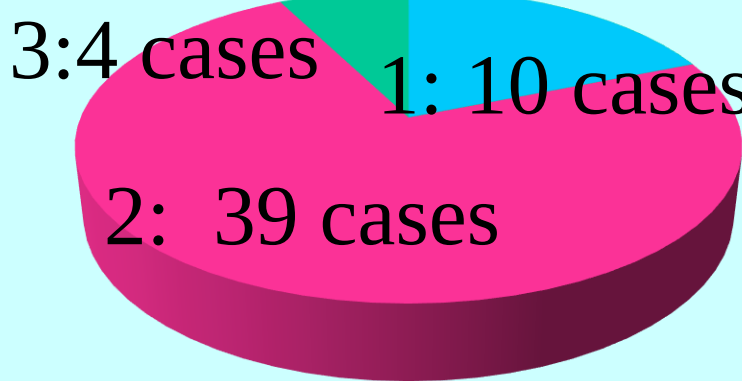
Patients

Between June 2016 and October 2023, 53 underwent a minimally invasive mitral valve repair with Memo 3D/4D Rechord system, and were included in this study.

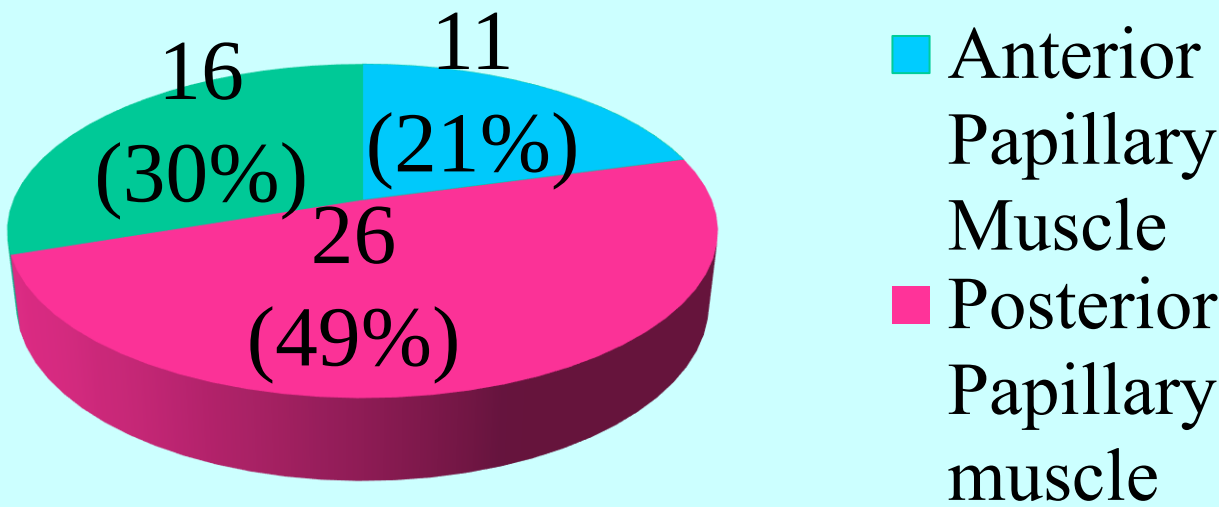
Gender	Male:33 Female:20
Age	63.2 ± 13.4 years old
Lesion	Anterior(bileaflet):9(9), posterior:35
Etiology	degenerative:53

Results

Number of the artificial chordae



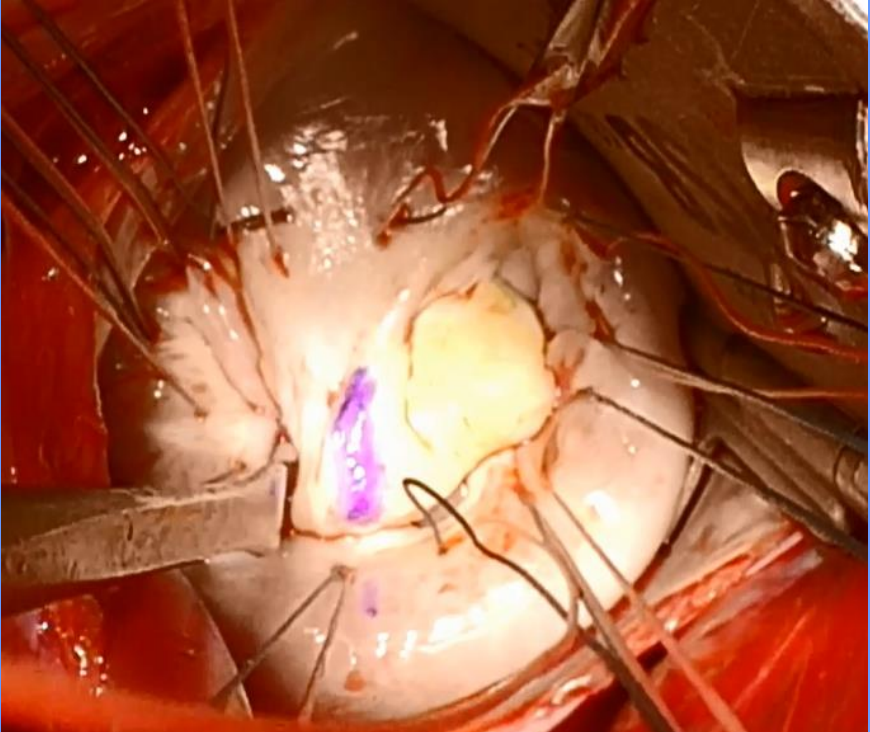
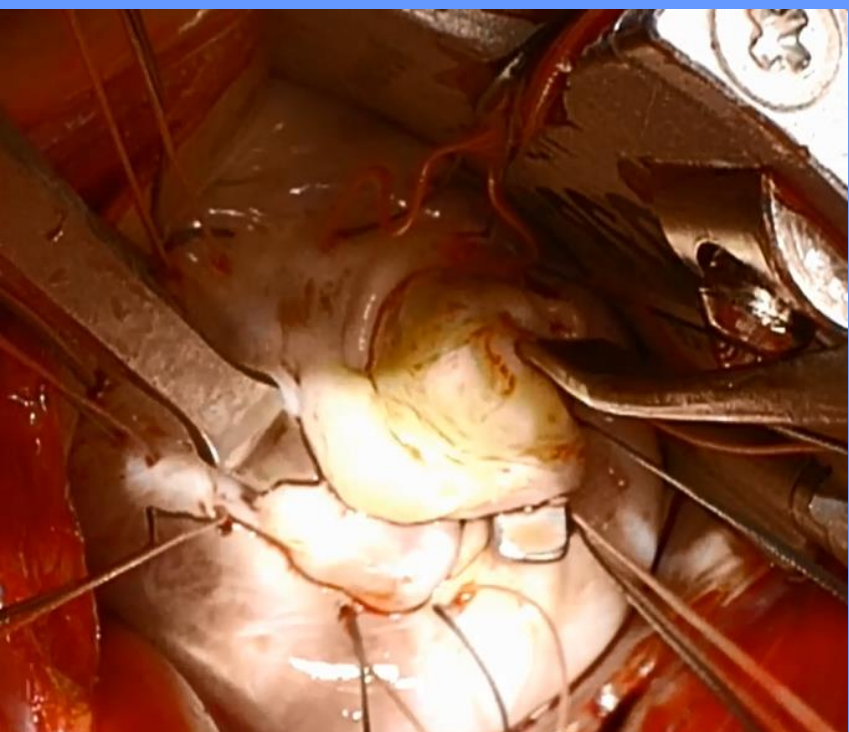
Papillary muscle attachment



Operative procedure

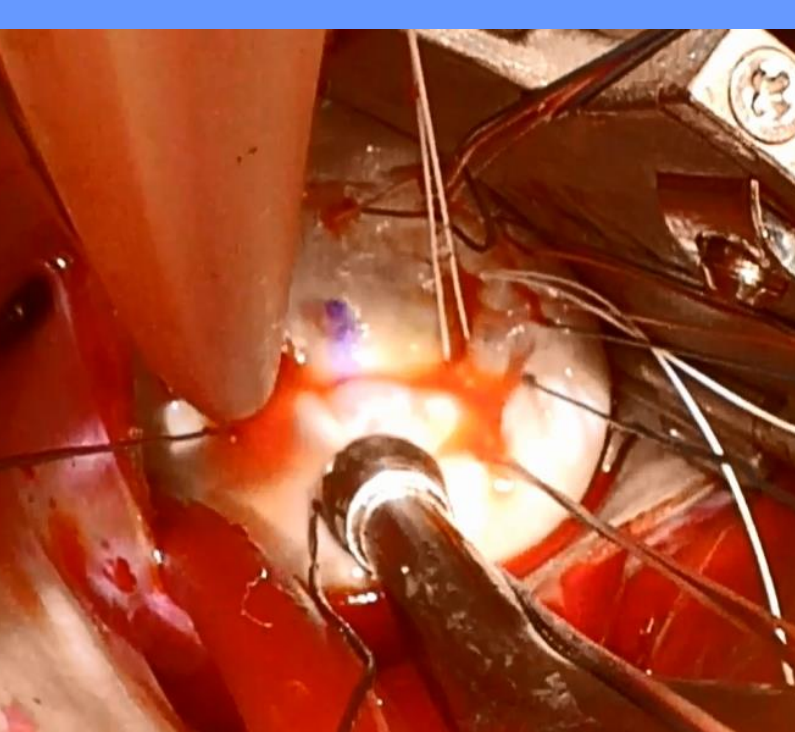
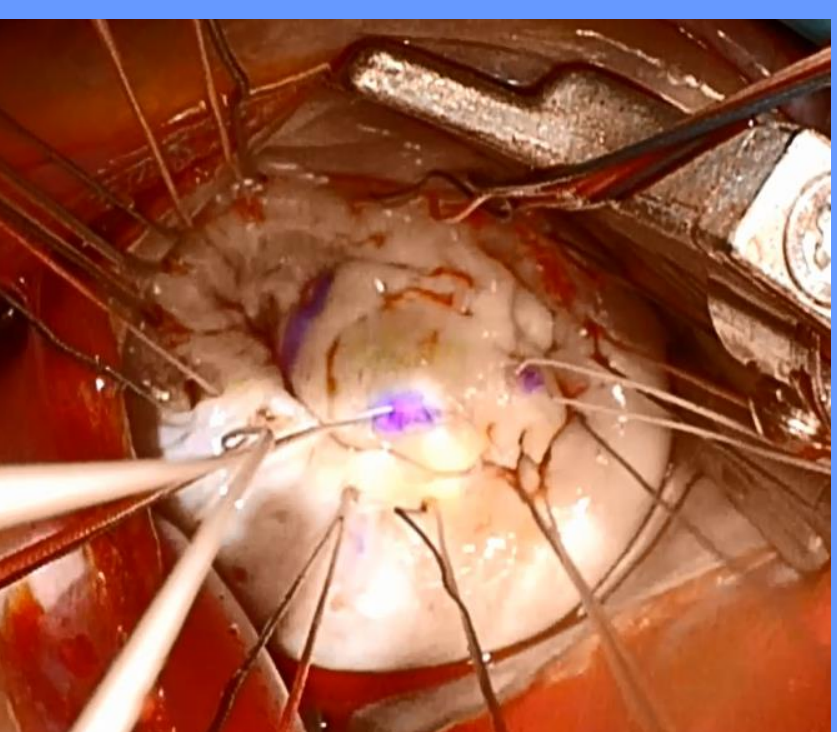
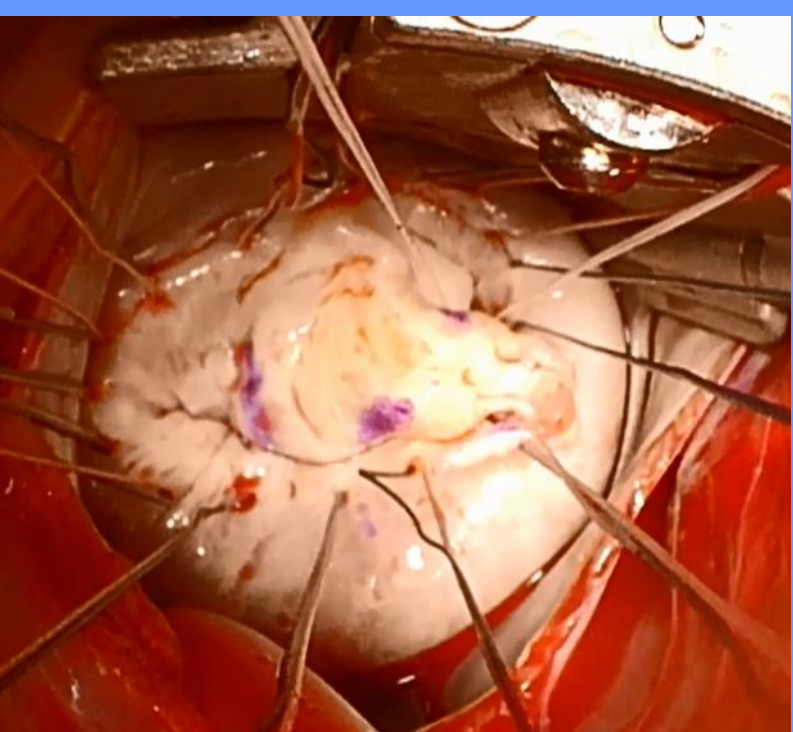
A case with A2-3 prolapse

(1) Inspection



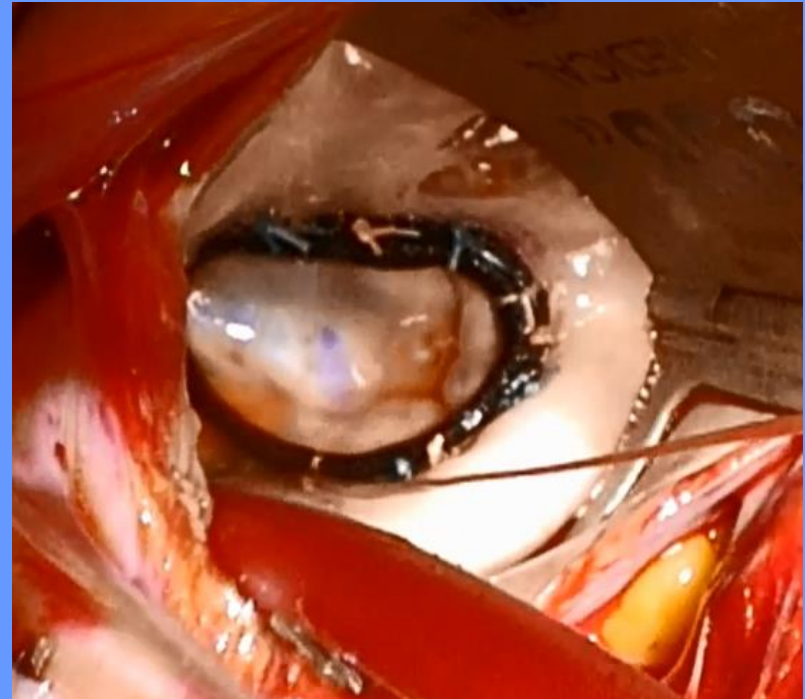
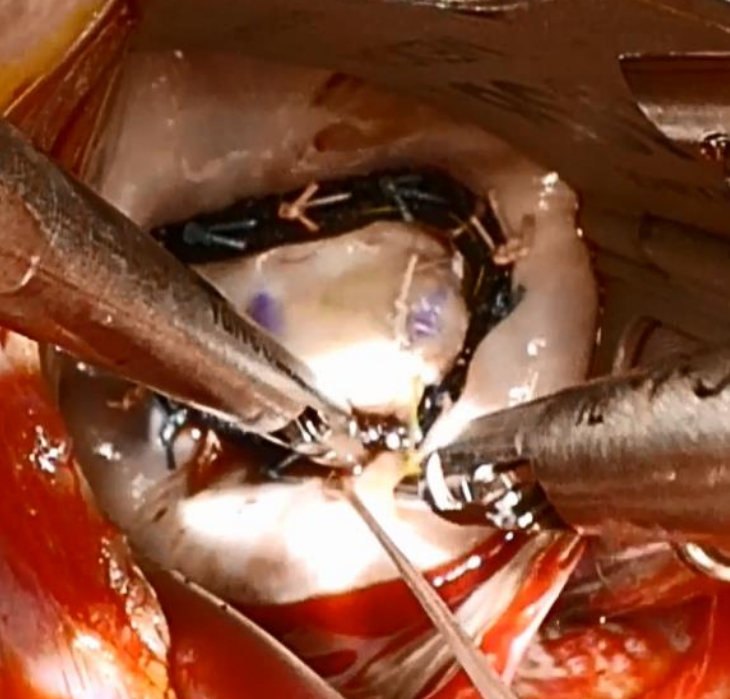
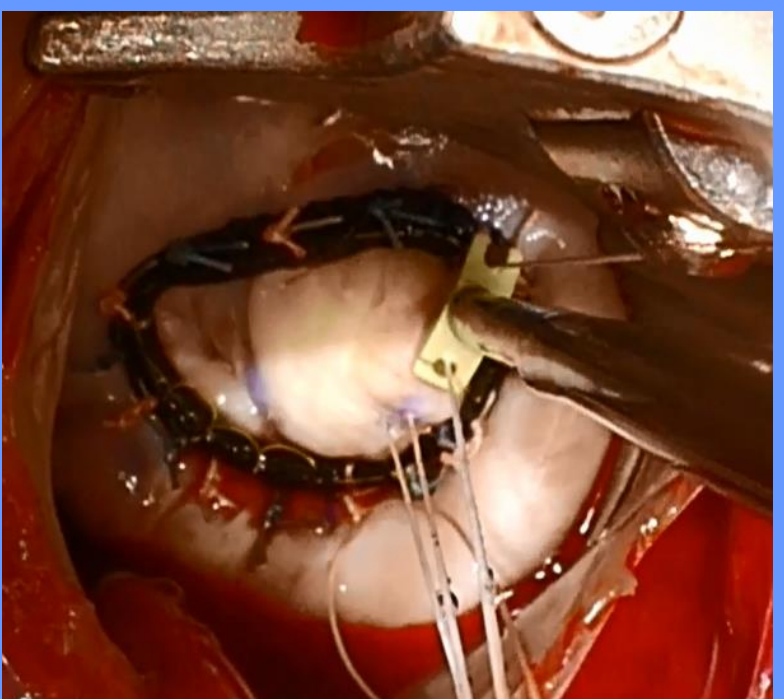
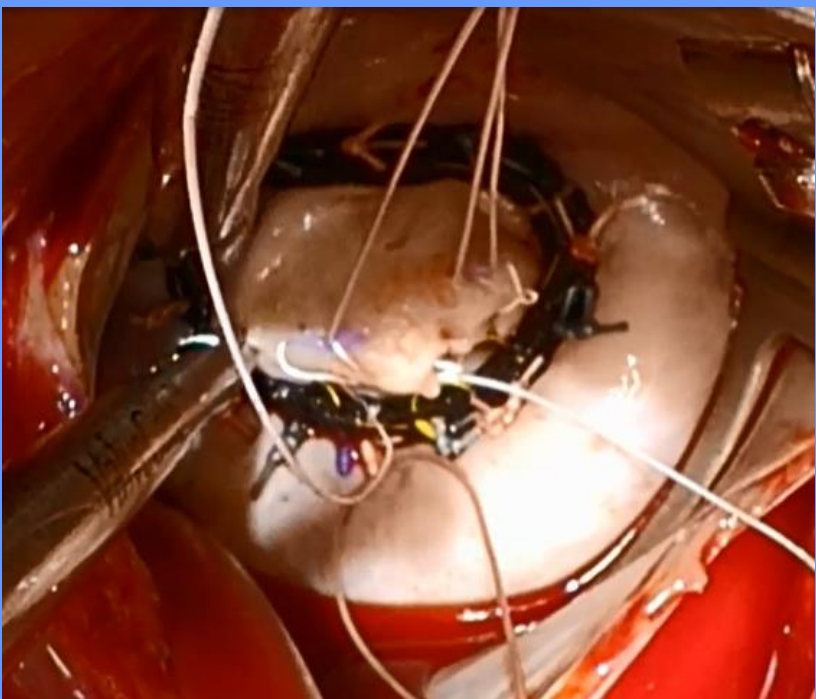
Following careful inspection, the center of anterior leaflet were determined.

(2) Pre-insertion of ring~



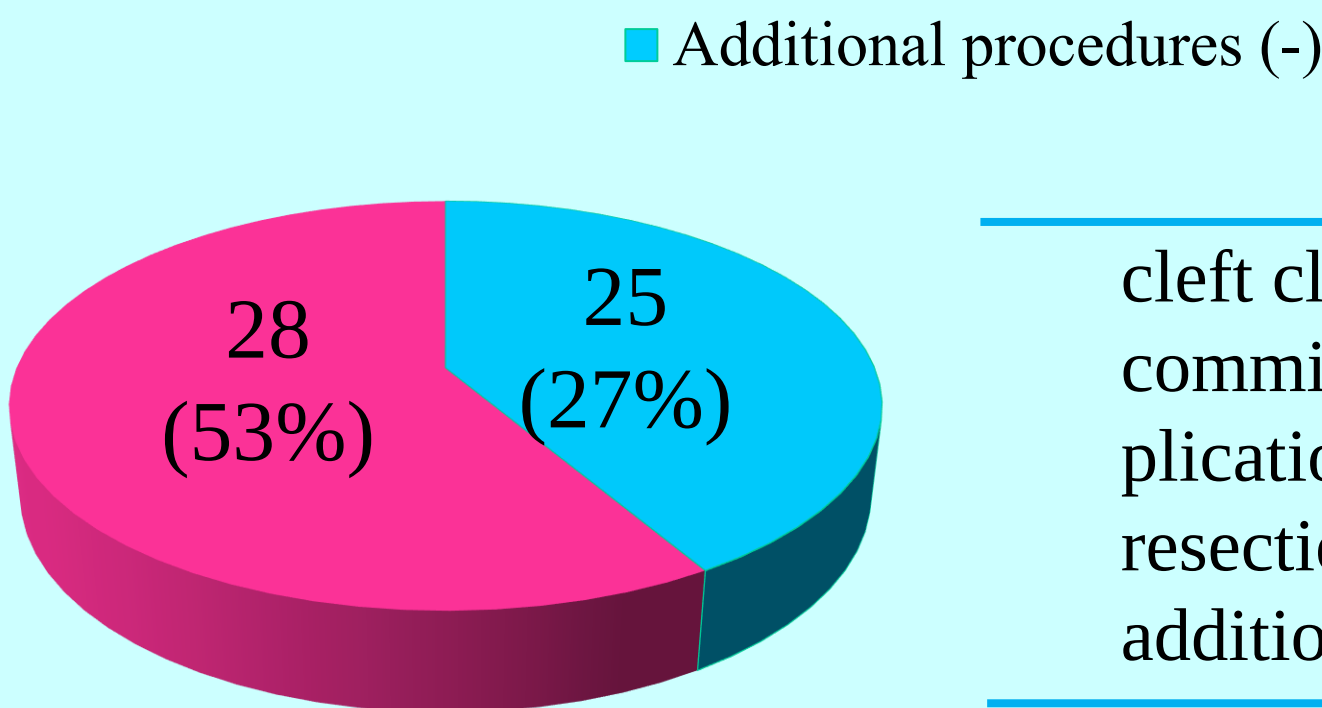
Two PTFE sutures were passed through the posterior papillary muscle and the free margin of the A2-3 leaflet. By performing saline test, we confirmed appropriate position of the PTFE chordae.

(3) After insertion of ring



PTFE chordae were passed through the loops, and the free margin of the A2-3 leaflet is brought to the posterior annulus. Then, PTFE was tied and the temporary loop system is removed.

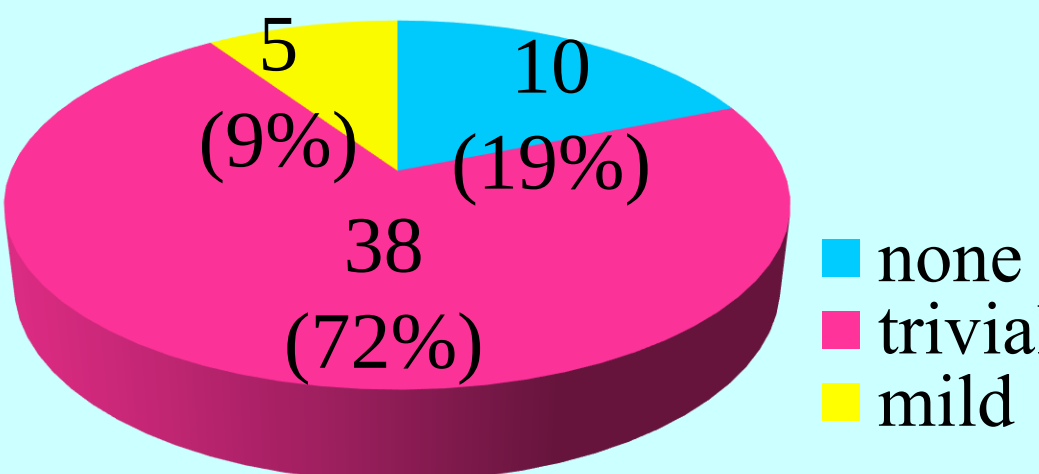
Additional procedures



Operative results

No operative mortality

Postoperative echocardiography at discharge



Prosthetic ring size

26mm:	1
28mm:	2
30mm:	15
32mm:	15
34mm:	16
36mm:	4

Long-term results

Although one patient with Barlow disease required repeat mitral valve repair four years after surgery, MR in all other cases was controlled very well.

Conclusions

Mitral valve repair using the Memo 3D/4D Rechord system is easy to adjust the length of the artificial chordae, and has good early and long-term results. This system is useful and considered to be one of the effective options in minimally invasive right thoracotomy approach cases.