Heart Failure After ASD Closure in the Elderly Patients

Toshio Nakanishi

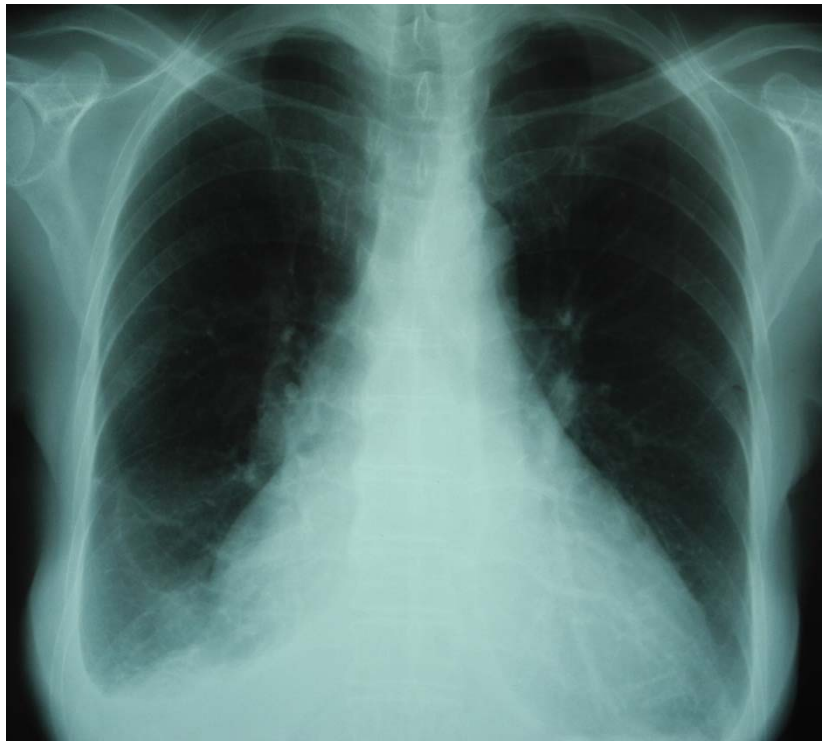
Department of Pediatric Cardiology,
Tokyo Women's Medical University, Tokyo, Japan

Background

Because of the long-standing right ventricular volume overload in the elderly patients with ASD, left ventricular reserve may also have deteriorated with age.

Case: 66 yrs old female

- At 60 yrs, ASD was found with mild exercise dyspnea. NYHA II. BNP 83.
- At 65 yrs, dyspnea on exercise, CTR 73%, BNP 430, NYHA IV.
- At 65 yrs, preconditioning with milrinone and DOB was continued for 45 days BNP 92.

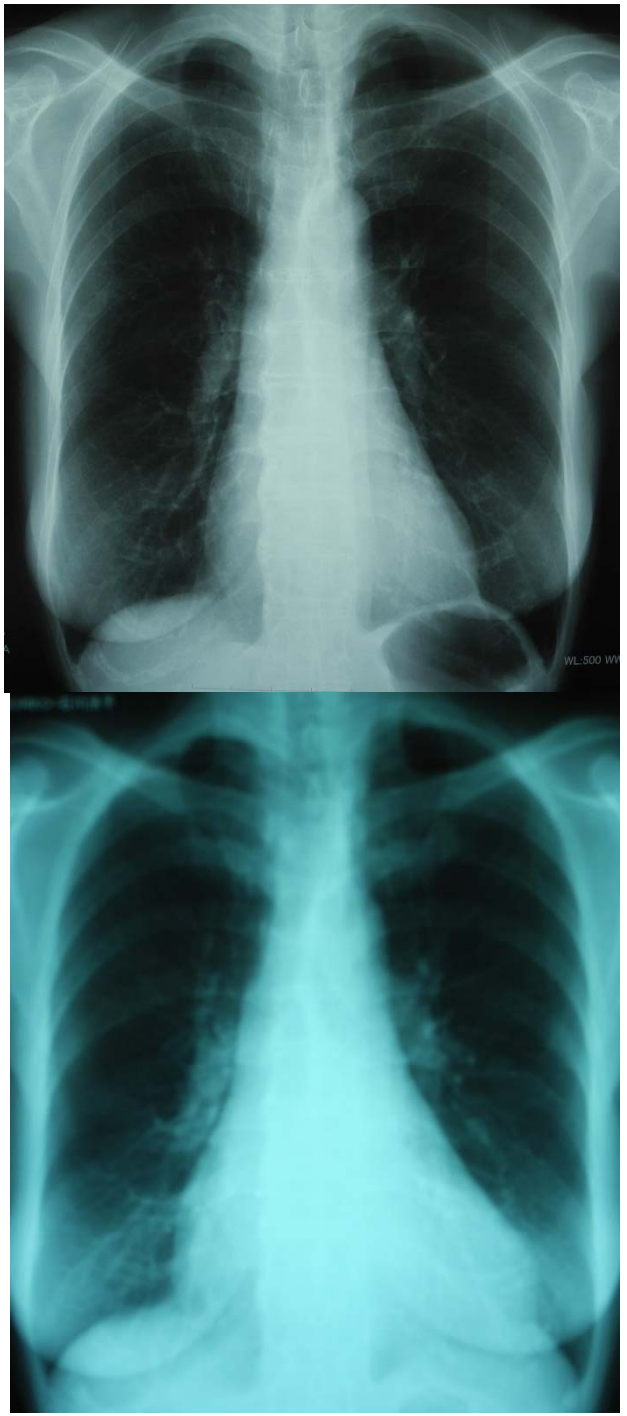


Before preconditioning

- LVIDd 29mm, LVFS 0.39
- LV E/A 58/ -, E/e’ 8.5
- Mild Mr

After ASD closure

- 1 month after ASD closure, mild Mr, BNP 20, CTR 51%, and NYHA III.
- 3 months after ASD closure, severe MR, BNP 3150, CTR 65 %, and NYHA IV.



3 months after ASD closure

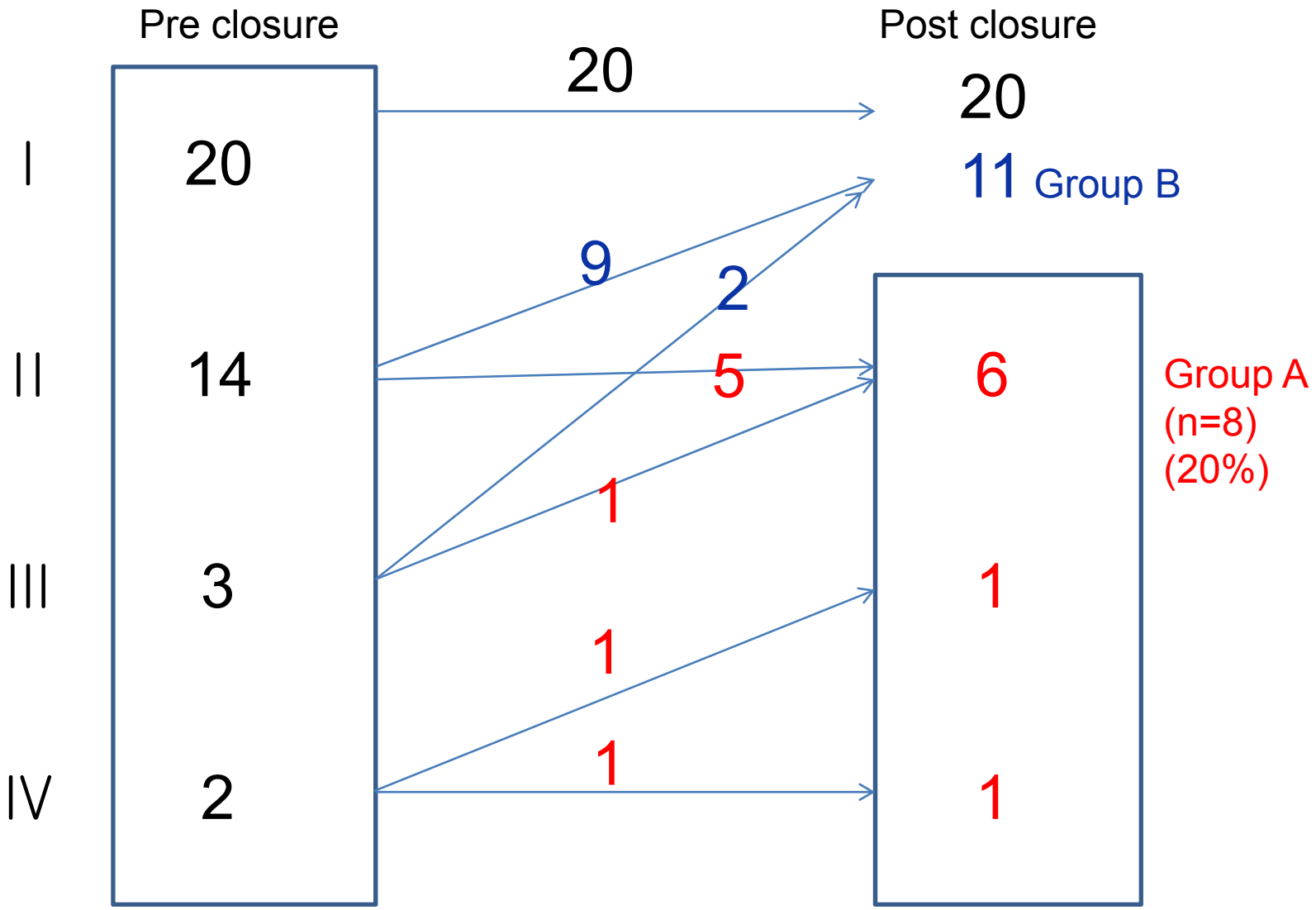
- LVIDd 58 mm, LVFS 0.12
- LV E/e’ 23
- Severe MR

Subjects

- Patients >60 years old, who underwent transcatheter ASD closure in our institute.

- Patient Profile (N=39)
  - Age 68 ±6 year (60-83)
  - Follow up periods 21 ± 11 month
  - NYHA functional class Ⅰ 20, Ⅱ 14, Ⅲ 4, Ⅳ 1
  - BNP 117 ± 119pg/mL
  - CTR 57 ± 8 %
  - AF or af n=13
  - Qp/Qs 2.6 ± 1.0

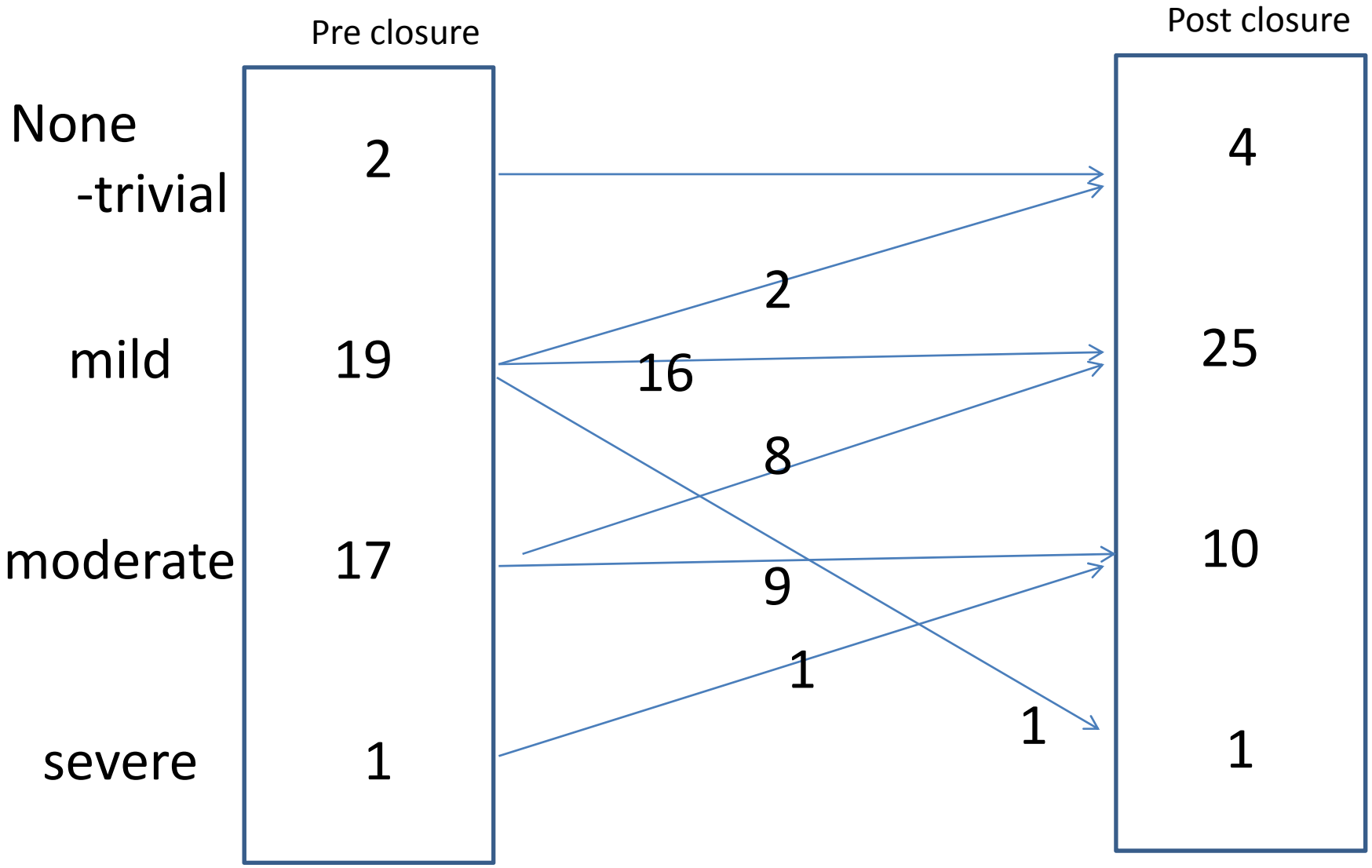
NYHA functional class



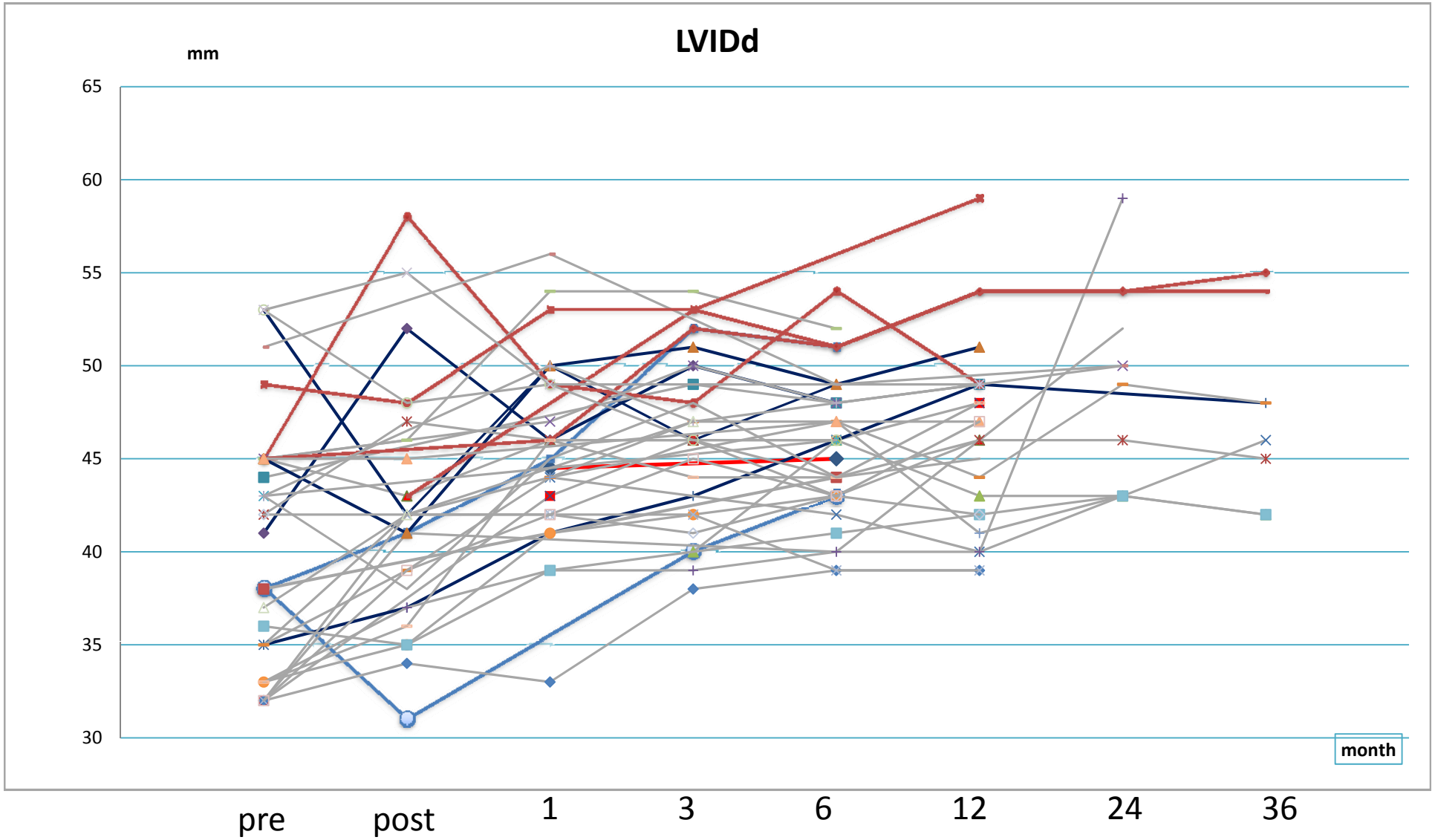
Result

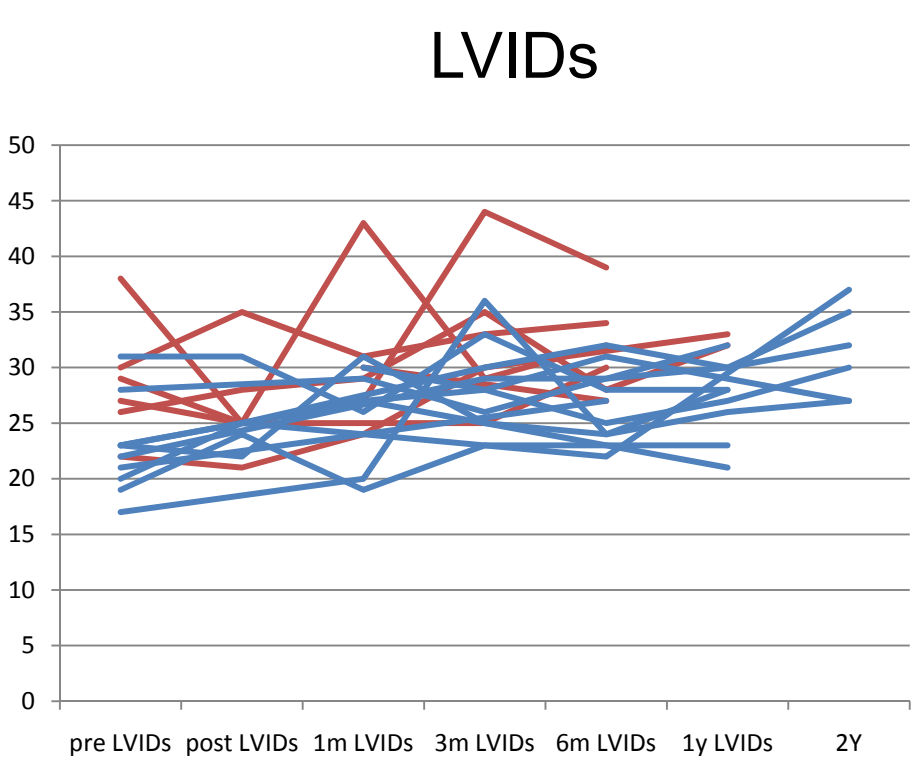
	Group A : symptomatic	Group B: asymptomatic	P value
N	8	11	
CTR (%)	64 ± 9	59 ± 6	0.23
BNP (pg/ml)	194 ±169	167 ± 120	0.72
AF or af	4	7	0.78
Qp/Qs	2.9 ± 1.5	3.2 ± 1.1	0.61
Device size	18.9 ± 5.2	21.7 ± 5.4	0.28
LVIDd (mm)	41 ± 6.5	38 ± 5.5	0.24
LDIDs (mm)	28.7 ± 5.4	22.7 ± 4.1	0.045
LVFS	0.31 ± 0.07	0.40 ± 0.06	0.027
MR (>mild)	4	6	0.91

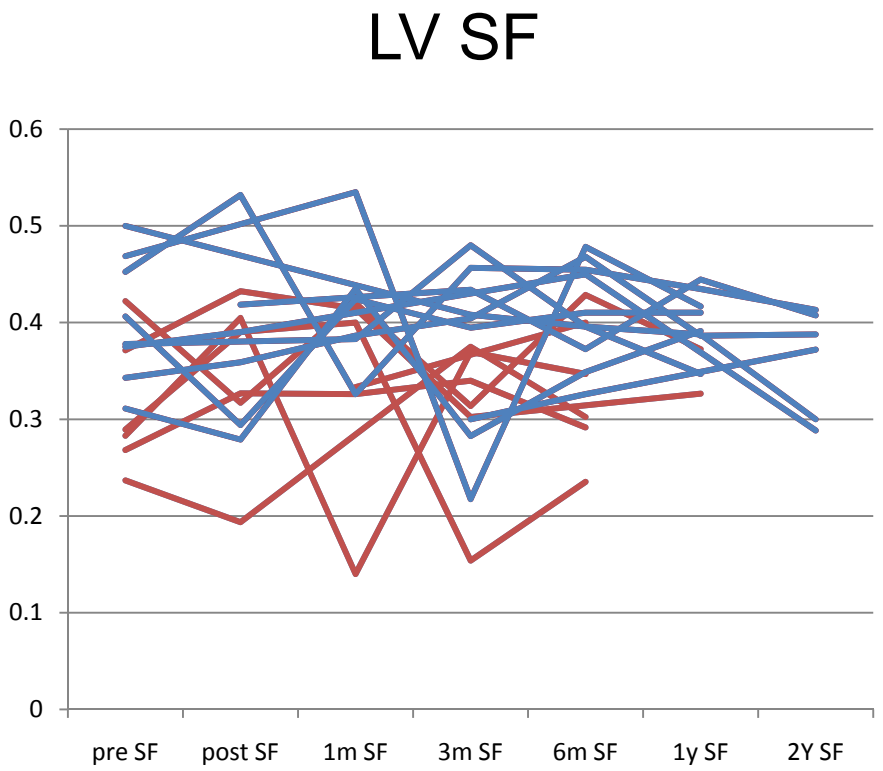
Mitral regurgitation



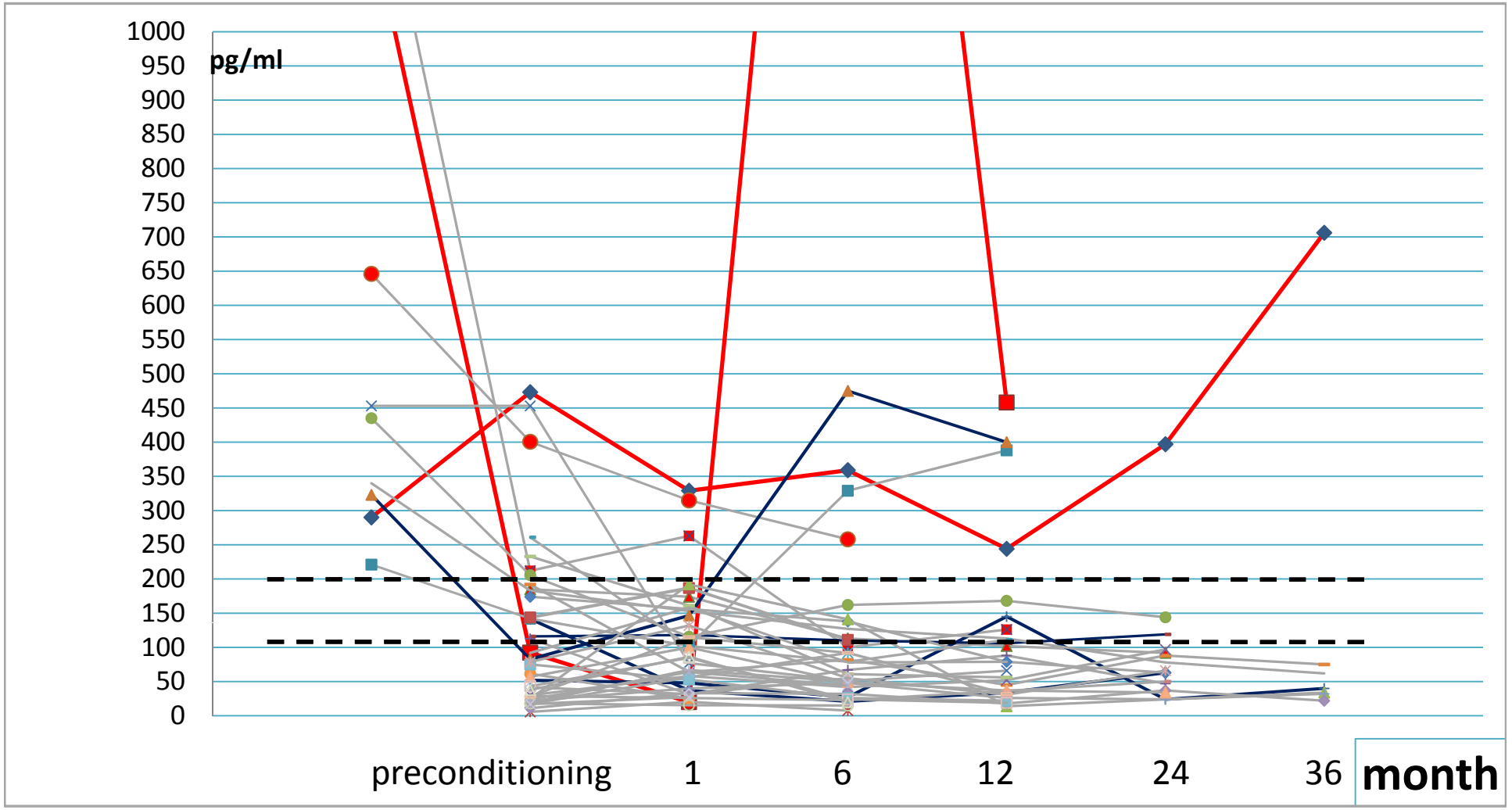
LVIDd




LVIDs
50
45
40
35
30
25
20
15
10
5
0
pre LVIDs
post LVIDs
1m LVIDs
3m LVIDs
6m LVIDs
1y LVIDs
2Y


LV SF
0.6
0.5
0.4
0.3
0.2
0.1
0
pre SF
post SF
1m SF
3m SF
6m SF
1y SF
2Y SF

BNP after ASD closure



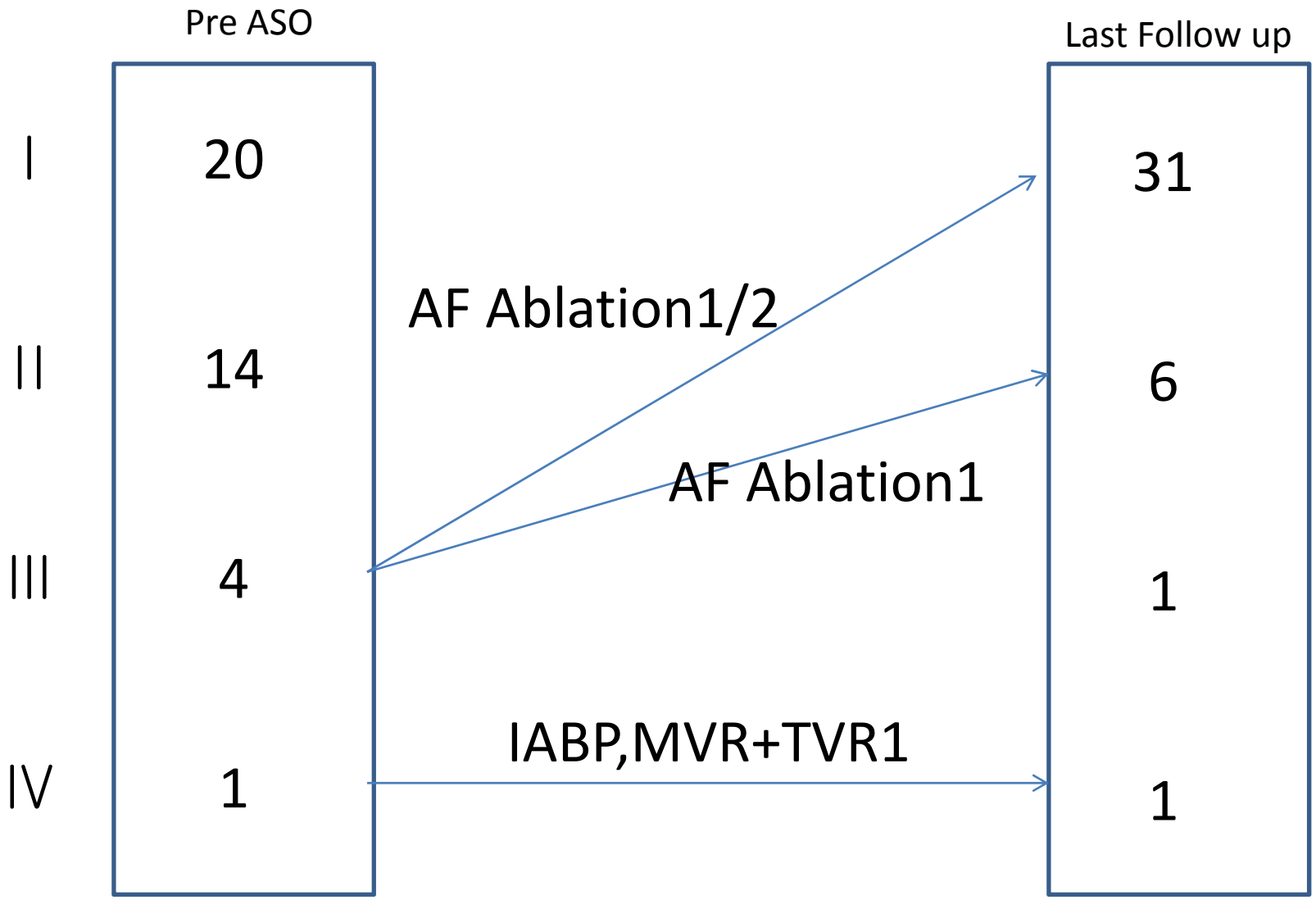
Frequency of CHF after ASD closure

- NYHA ≥ II 8 (20%)
- BNP ≥100 pg/ml 10 (25%)
- BNP ≥200 5 (13%)

Conclusions

- CHF, NYHA ≥II, was observed in 50% of patients ≥ 60 yrs of age before ASD closure. CHF remained in 20% of patients after ASD closure.
- Efficacy of preconditioning in pts with CHF to improve long-term results after ASD closure remains to be determined.

Other treatments for CHF



The Japanese Circulation Society

COI Disclosure

Tetsuko Ishii

The authors have no financial conflicts of interest to disclose concerning the presentation.

Methods

1, To investigate NYHA functional class change after ASO

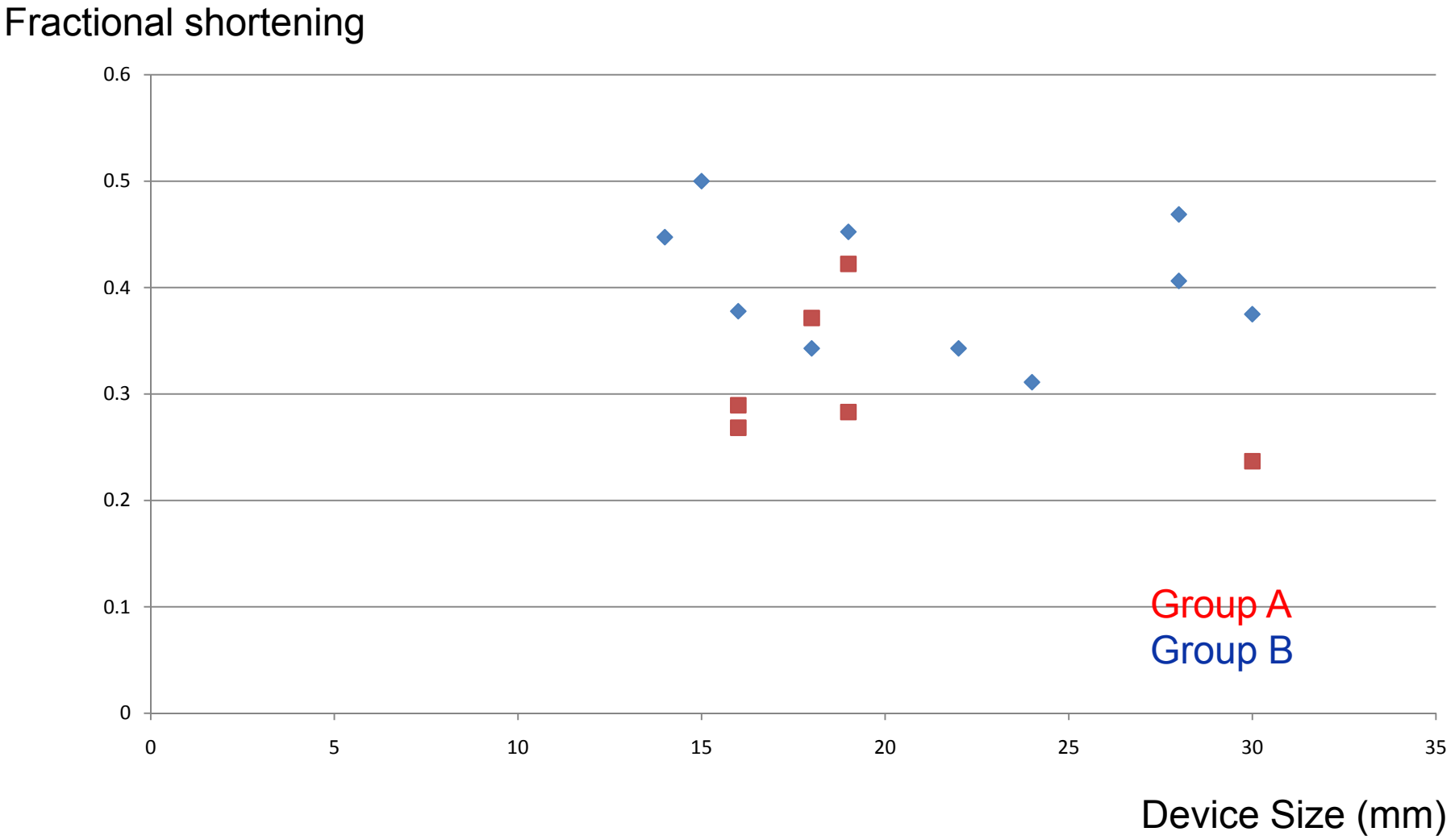
2, To compare pre ASO cardiac parameters between 2 groups (A and B).

Group A was those whose NYHA class remained Ⅱ> NYHA .

Group B was those whose NYHA class was improved to Ⅰ after ASO.

3, To investigate the effect of medication before ASO (preconditioning using PDE3 inhibitor or DOB) on mid-term result after ASO.

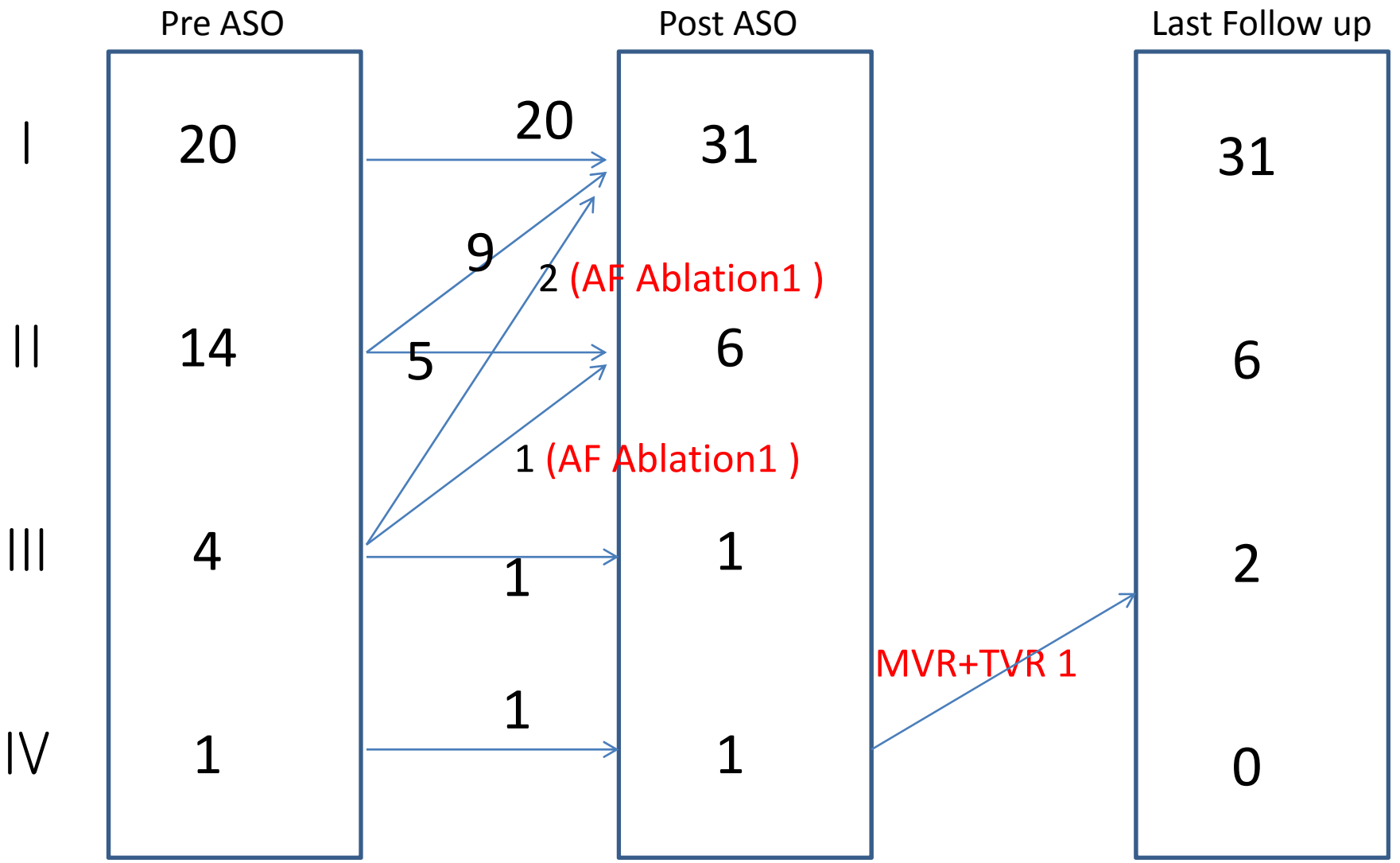
Result 2 The Relationship Between Fractional shortening and Device Size



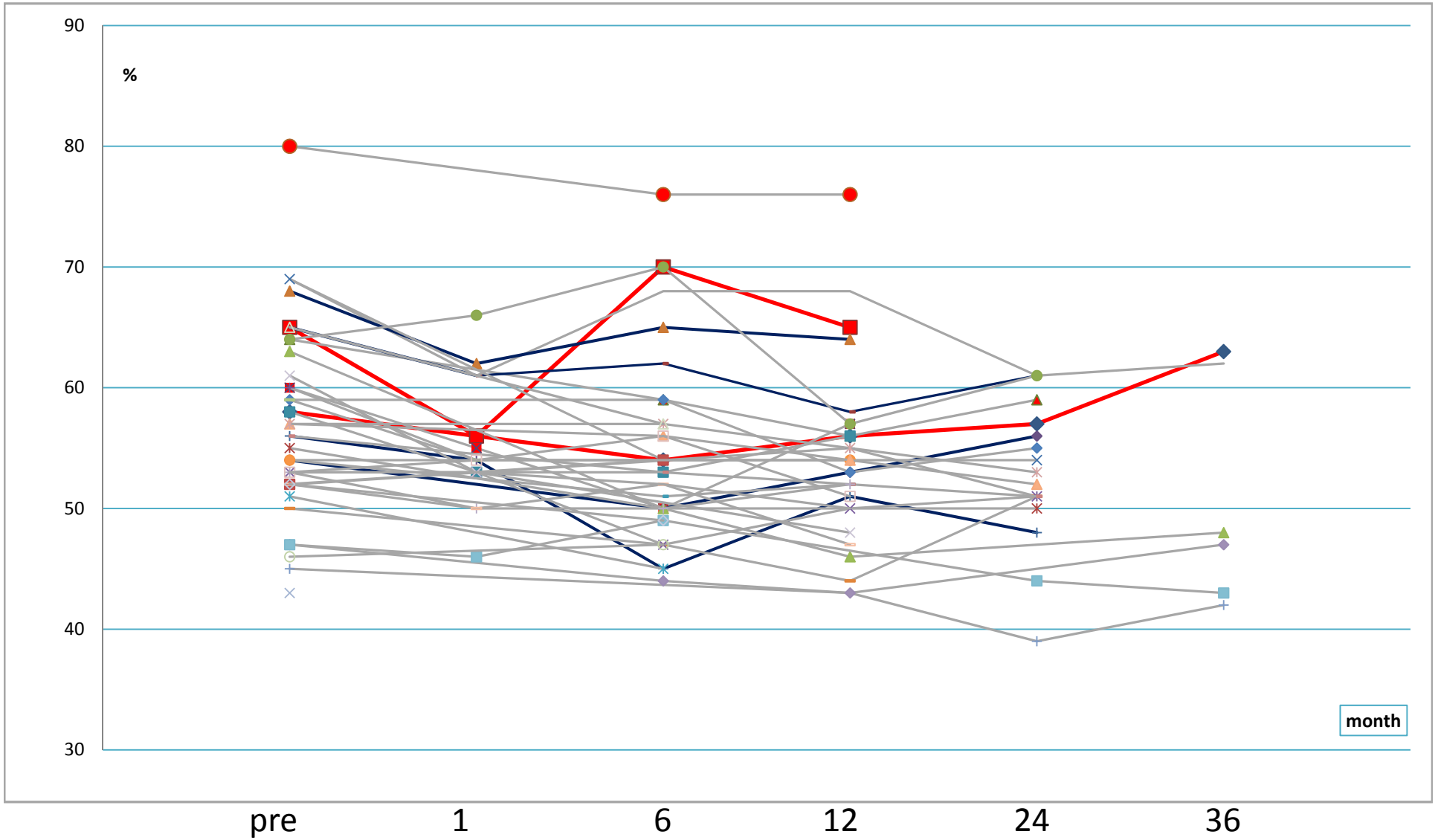
Result 3

	Group A (7)	Group B (11)	P value
Pre medication (+)	8	9	
Pre medication (-)	0	2	0.23

Other treatments for CHF



CHF after SAO: CTR



Mitral regurgitation