Table 1: Preoperative characteristics

Age, (year)	50 (37-63)
Male, n (%)	3 (60%)
Body surfece area (m2)	1.64 (1.61-1.77)
Atrial fibrillation, n (%)	0 (0%)
Hemodialysis, n (%)	0 (0%)
Hypertension, n (%)	0 (0%)
Diabetes mellitus, n (%)	0 (0%)
Dyslipidemia, n (%)	0 (0%)
Coronary artery disease, n (%)	0 (0%)
Cerebrovascular disease, n (%)	0 (0%)
Miocardial infarction, n (%)	0 (0%)
History of cardiac surgery, n (%)	0 (0%)
NYHA Class	
I/II	0 (0%)
III	5 (100%)
IV	0 (0%)
Echocardiographic parameters	
LVDd (mm)	53 (47-57)
LVDs (mm)	31 (29-37)
Ejection fraction (%)	70 (65-75)
LAD (mm)	36 (31-40)
MR grade	
moderate	1 (20%)
severe	4 (80%)
AR ≧ moderate	0 (0%)
TR ≧ moderate	0 (0%)

NYHA: New York Heart Association functional classification, LVDd: left ventricular end-diastolic dimension, LVDs: left ventricular end-systolic dimension, LAD: left atrial diameter,

MR: mitral valve regurgitation, AR: aortic valve regurgitation, TR: tricuspid valve regurgitation

Table 2: Operative characteristics of each patients

	Age Sex	Infective site (Bacterial species)	Operative procedures
Patient 1	37 M	A2+P2 (MRCNS)	A2 reconstruction with FAP+ 2 pairs of AC + P2 quadrangular resection and suture + MAP (26mm-PhysioII ring)
Patient 2	54 F	P3 (viridans streptococcus)	P3 reconstruction with FAP + MAP (28mm-PhysioII ring)
Patient 3	63 M	A3+P2-3 (viridans streptococcus)	A3+P2-3 reconstruction with FAP + 4 pairs of AC + MAP (26mm-PhysioII ring)
Patient 4	39 M	P2-3 (viridans streptococcus)	P2-3 reconstruction with FAP + 1 pairs of AC + MAP (32mm-PhysioII ring)
Patient 5	57 F	A1-2+AC+P1-2 (MSSA)	A1-2+P1-2 reconstruction with FAP + 4 pairs of AC + MAP (28mm-Mamo 3D)

M: male, F: female, FAP: fresh autologous pericardium, AC: artificial chordae, MAP: mitral annuloplasty, MRCNS: methicillin-resistant coagulase-negative staphylococci, MSSA: methicillin-susceptible staphylococcus aureus

Table 3: Early result and pre-discharge echocardiographic data

Operative time (min)	281 (234-364)
CPB time (min)	167 (121-216)

Cross clamp time (min)	141 (95-183)
Concomitant surgery	
PFO closure	1 (20%)
TAP, n (%)	0 (0%)
Maze, n (%)	0 (0%)
LAA closure, n (%)	0 (0%)
Second pump, n (%)	0 (0%)
Hospital stay (days)	35 (23-43)
Hospital mortality, n (%)	0 (0%)
Complications, n (%)	0 (0%)
Stroke, n (%)	0 (0%)
Heart failure, n (%)	0 (0%)
Atrial fibrillation, n (%)	0 (0%)
Infection, n (%)	0 (0%)
Bleeding, n (%)	0 (0%)
Embolic event, n (%)	0 (0%)
Renal failure, n (%)	0 (0%)
tracheostomy, n (%)	0 (0%)
Echocardiographic parameters	
Pre-discharge TTE	
LVDd (mm)	45 (43-47)
LVDs (mm)	30 (28-34)
Ejection fraction (%)	62 (50-68)
LAD (mm)	34 (31-40)
MR	
none, n (%)	2 (40%)
trivial n (%)	3 (60%)
$\geq$ moderate n (%)	0 (0%)
MV PHT	86 (64-98)
MV mPG	3.8 (2-6)

TR ≧ moderate	0 (0%)

CPB: cardiopulmonary bypass, PFO: patent foramen ovale, TAP: tricuspid annuloplasty, LAA: left atrial appendage , TTE: transthoracic echocardiography, PHT: pressure half time, LVDd: left ventricular end-diastolic dimension, LVDs: left ventricular end-systolic dimension, LAD: left atrial diameter, MR: mitral valve regurgitation, MV: mitral valve, mPG: mean pressure gradient,, TR: tricuspid valve regurgitation

Table 4: Latest echocardiographic data of non-recurrent patients

LVDd (mm)	45 (39-49)
LVDs (mm)	27 (29-31)
Ejection fraction (%)	69 (62-75)
LAD (mm)	34 (22-38)
MR	
none, n (%)	0 (0%)
trivial n (%)	2 (40%)
mild n (%)	2 (40%)
MV mPG	3.45 (2-5)
TR ≧ moderate	0 (0%)

LVDd: left ventricular end-diastolic dimension, LVDs: left ventricular end-systolic dimension, LAD: left atrial diameter, MR: mitral valve regurgitation, MV: mitral valve, mPG: mean pressure gradient, TR: tricuspid valve regurgitation