

Table S1 Types of congenital heart disease associated with sinus of Valsalva aneurysms in the study cohort

Type of congenital heart disease, n (%)	Entire cohort (n=103)	Conservative group (n=27)	Surgical group (n=76)	P value
None	51 (49.5)	17 (63.0)	34 (44.7)	0.632
Isolated VSD	9 (8.7)	0	9 (11.8)	
Isolated ASD	1 (1.0)	0	1 (1.3)	
VSD and PFO	3 (2.9)	0	3 (3.9)	
VSD and ASD	1 (1.0)	0	1 (1.3)	
VSD, BAV and PFO	1 (1.0)	0	1 (1.3)	
VSD and MVP	1 (1.0)	0	1 (1.3)	
VSD and Gerbode defect	1 (1.0)	0	1 (1.3)	
PFO and MVP	1 (1.0)	0	1 (1.3)	
PFO and BAV	4 (3.9)	1 (3.7)	3 (3.9)	
Isolated BAV	19 (18.4)	5 (18.5)	14 (18.4)	
Isolated MVP	1 (1.0)	0	1 (1.3)	
Isolated PFO	7 (6.8)	3 (11.1)	4 (5.3)	
Coarctation of the aorta and BAV	1 (1.0)	1 (3.7)	0	
ASD, BAV and PFO	1 (1.0)	0	1 (1.3)	
ASD, BAV	1 (1.0)	0	1 (1.3)	

ASD, atrial septal defect; BAV, bicuspid aortic valve; MVP, mitral valve prolapse; PFO, patent foramen ovale; VSD, ventricular septal defect.

Table S2 Early and late complications in the surgical group (n=76)

Complications	N (%) (n=76)
Early complications	
New onset AF	13 (17.1)
Hypotension	12 (15.8)
Acute heart failure	11 (14.5)
Acute kidney injury	6 (7.9)
RV dysfunction	4 (5.3)
Complete heart block	3 (3.9)
Coagulopathy	3 (3.9)
Pulmonary thromboembolism	2 (2.6)
Postop cerebrovascular event	2 (2.6)
Pericarditis	2 (2.6)
Surgical wound infection	2 (2.6)
Sepsis/endocarditis	2 (2.6)
Septic shock	1 (1.3)
LVAD placement	1 (1.3)
Acute MI	1 (1.3)
Pseudoaneurysm of the left brachial vein	1 (1.3)
Late complications	
Para-valvular leak of the aortic prosthesis	5 (6.6)
Aortic valve repair failure or redo AVR	4 (5.3)
Patch rupture and/or re-rupture to RV	2 (2.6)
Thrombosis of the prosthetic aortic valve	2 (2.6)
Endocarditis of the prosthetic aortic valve	2 (2.6)
CVA	1 (1.3)
Septic embolic stroke	1 (1.3)
LVAD infection/sepsis	1 (1.3)

AF, atrial fibrillation; AVR, aortic valve replacement; CVA, cerebrovascular accident; LVAD, left ventricular assist device; MI, myocardial infarction; RV, right ventricle.

Table S3 Echocardiographic characteristics of the study cohort

Echocardiographic variables	Entire cohort (n=103)	Conservative group (n=27)	Surgical group (n=76)	P value
Aortic valve cusp number, n (%)				0.997
Bicuspid	27 (26.2)	7 (25.9)	20 (26.3)	
Tricuspid	72 (69.9)	19 (70.4)	53 (69.7)	
Severe ($\geq 3+$) aortic insufficiency, n (%)	14 (13.9)	1 (3.7)	13 (17.6)	0.105
LVEF, %, median [range]	56 [47]	60 [42]	56 [38]	0.242
LV mass, g, mean \pm SD	201.2 \pm 77.8	157.3 \pm 78.4	220.1 \pm 71.3	0.041*
LV septal wall thickness, cm, median (range)	1.20 (1.32)	1.25 (1.10)	1.20 (1.32)	0.724
LV posterior wall thickness, cm, median (range)	1.10 (1.40)	1 (1.20)	1.10 (1.30)	0.755
RV systolic function, n (%)				0.648
Normal	90 (88.2)	23 (88.5)	67 (88.2)	
Mildly decreased	7 (6.9)	1 (3.8)	6 (7.9)	
Moderately decreased	3 (2.9)	1 (3.8)	2 (2.6)	
Moderate-severe and severely decreased	2 (2.0)	1 (3.8)	1 (1.3)	
RVSP, mmHg, median [range]	30 [99]	35 [99]	29 [78]	0.488

*, P value <0.05 denotes statistical significance. LV, left ventricular; LVEF, left ventricular ejection fraction; RV, right ventricular; RVSP, right ventricular systolic pressure; SD, standard deviation.