

Figure S1 Flow chart of the study sample.

Table S1 Baseline characteristics according to aortic valve morphology in 338 patients who underwent valve surgery for native aortic valve endocarditis or prosthetic aortic valve endocarditis at Karolinska University Hospital, Sweden, 2002–2020

	All patients, N=338	Tricuspid aortic valve, N=216 (64%)	Bicuspid aortic valve, N=122 (36%)
Age, years, mean (SD)	59 (17.5)	63 (12.3)	53 (15.3)
Female	69 (20.4)	48 (22.2)	21 (17.2)
Body mass index (kg/m ²), mean (SD)	25.9 (4.7)	26.0 (4.7)	25.6 (4.8)
Hypertension	101 (29.9)	73 (33.8)	28 (22.3)
Diabetes mellitus	43 (12.7)	31 (14.4)	12 (9.8)
Intravenous drug user	31 (9.2)	24 (11.1)	7 (5.7)
Prior percutaneous coronary intervention	11 (3.4)	9 (4.2)	2 (1.6)
Prior stroke	73 (21.6)	42 (19.4)	31 (25.4)
Atrial fibrillation	45 (13.3)	30 (13.9)	14 (11.5)
Chronic obstructive pulmonary disease	25 (7.4)	21 (9.7)	4 (3.3)
Peripheral arterial disease	9 (2.7)	6 (2.8)	3 (2.5)
Critical preoperative state	50 (14.8)	32 (14.8)	18 (14.8)
EuroSCORE I, mean (SD)	10.0 (3.6)	10.0 (3.4)	10.1 (3.5)
Left ventricular ejection fraction			
>50	139 (41.1)	93 (43.1)	46 (37.7)
31–50	74 (21.9)	42 (30.0)	32 (26.2)
21–30	5 (1.5)	4 (2.9)	1 (0.8)
<20	2 (0.6)	1 (0.7)	1 (0.8)
eGFR (mL/min/1.73 m ²)			
>60	230 (68.0)	139 (64.3)	91 (74.6)
30–60	74 (21.9)	51 (23.6)	23 (18.9)
0–29	17 (5.0)	12 (5.6)	5 (4.1)
Preoperative dialysis	13 (3.8%)	11 (5.1)	2 (1.6)
Prior cardiac surgery	88 (26.0)	41 (19.0)	47 (38.5)
Prior endocarditis	14 (4.1)	7 (3.2)	7 (5.7)
Cardiovascular implantable electronic device	17 (5.0)	8 (6.6)	9 (7.4)
Preoperative complications			
Central nervous system embolic event	53 (15.7)	31 (14.4)	22 (18.0)
Peripheral embolic event	33 (9.8)	21 (9.7)	12 (9.8)
Valvular abscess	111 (32.8)	58 (26.9)	53 (43.4)
Vegetations	245 (72.5)	163 (75.5)	82 (67.2)
Concomitant surgery			
CABG	18 (5.3)	16 (7.4)	2 (1.4)
Aorta ascendens	72 (21.3)	34 (15.7)	38 (31.4)

Table S1 (continued)

Table S1 (continued)

	All patients, N=338	Tricuspid aortic valve, N=216 (64%)	Bicuspid aortic valve, N=122 (36%)
Biological aortic valve replacement	209 (61.8)	150 (69.4)	59 (48.4)
Acute kidney injury ^c	172 (50.9)	114 (52.8)	58 (47.5)
Year of surgery			
2002–2007	76 (22.5)	45 (20.8)	31 (25.4)
2008–2013	110 (32.5)	72 (33.3)	38 (31.1)
2014–2019	152 (45.0)	99 (45.8)	53 (43.4)

Data are presented as n (%) unless otherwise noted. ^c, Defined as >0.3 mg/dL (>26 μmol/L) increase in postoperative creatinine concentrations, or postoperative creatinine >1.5*baseline, or new postoperative dialysis. PVE, prosthetic valve endocarditis; Egfr, estimated glomerular filtration rate; SD, standard deviation

Table S2 Survival according to valve morphology and prosthetic valve status in 338 patients who underwent aortic valve surgery due to endocarditis at Karolinska University Hospital, Sweden, 2002–2020

	Tricuspid aortic valve, n=181 (53%)	Bicuspid aortic valve, n=80 (24%)	Prosthetic valve endocarditis, originally tricuspid, n=35 (11%)	Prosthetic valve endocarditis, originally bicuspid, n=42 (13%)
Early mortality, number (%)	10 (5.5%)	3 (3.8%)	2 (5.7%)	9 (21%)
All-cause mortality, number (%)	64 (35%)	12 (15%)	14 (39%)	13 (30%)
1 year	84%	95%	89%	74%
5 years	69%	88%	71%	68%
10 years	59%	83%	56%	68%
14 years	49%	80%	17%	68%

Table S3 Causes of death for 103 patients who underwent aortic valve surgery due to endocarditis at Karolinska University Hospital, Sweden, 2002–2020

	Tricuspid aortic valve, n=78	Bicuspid aortic valve, n=25
Death within 30 days of surgery	12	12
Prosthetic valve endocarditis	10	2
Heart failure	6	3
Cancer	6	2
Covid-19	2	1
Mediastinal abscess	0	1
Acute coronary syndrome	4	0
Other/multiorgan failure	8	0
Cardiac arrest	2	0
Intracerebral lesions	6	0
Sepsis or pneumonia	7	0
Choking	1	0
Unknown	14	4

Table S4 Cumulative incidence of reoperation according to valve morphology and prosthetic valve endocarditis in 338 patients who underwent aortic valve surgery due to endocarditis at Karolinska University Hospital, Sweden, 2002–2020

	Number of patients	Cumulative incidence (95% CI)		
		1 year	5 years	10 years
Tricuspid aortic valve	181 (54%)	5.3% (3.1–9.1%)	9.2% (5.9–14.4%)	13.7% (9.1–20.7%)
Bicuspid aortic valve	80 (24%)	6.0% (3.0–11.8%)	11.0% (6.2–19.6%)	17.5% (10.4–29.2%)
Prosthetic valve endocarditis, originally tricuspid	35 (10%)	6.8% (2.6–17.8%)	17.7% (8.7–35.8%)	23.3% (12.2–44.8%)
Prosthetic valve endocarditis, originally bicuspid	42 (12%)	5.4% (1.9–15.1%)	14.4% (6.6–31.1%)	19.2% (9.3–39.5%)

CI, confidence interval.

Table S5 Indications for valve reoperations according to valve morphology

	Tricuspid aortic valve, n=181	Bicuspid aortic valve, n=81	Prosthetic valve endocarditis, originally tricuspid, n=36	Prosthetic valve endocarditis, originally bicuspid, n=43
Prosthetic valve endocarditis	13 (7.2%)	4 (4.9%)	2 (5.6%)	3 (7.0%)
Aortic valve insufficiency (including paravalvular leakage)	3 (1.7%)	4 (4.9%)	2 (5.6%)	1 (2.3%)
Structural valve deterioration	2 (1.1%)	3 (3.7%)	1 (2.8%)	0 (0.0%)
Pseudoaneurysm	0 (0.0%)	1 (1.2%)	0 (0.0%)	1 (2.3%)
Type A dissection	1 (0.6%)	0 (0.0%)	1 (2.8%)	0 (0.0%)
Other	1 (0.6%)	0 (0.0%)	1 (2.8%)	1 (2.3%)

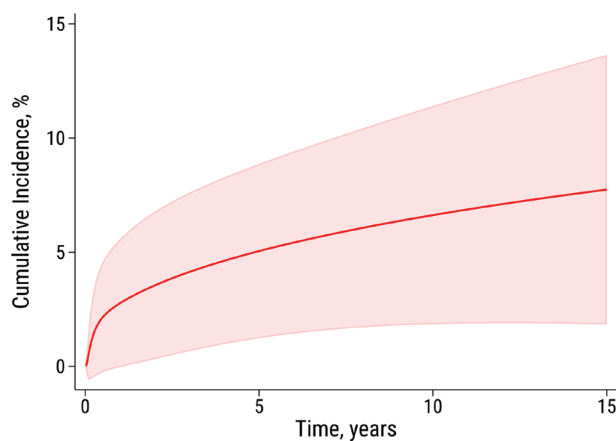


Figure S2 Cumulative incidence of reinfection in patients with bicuspid aortic valves after endocarditis surgery at Karolinska University Hospital, Sweden, 2002–2020.