

Supplementary Data

Infective Endocarditis Caused by Staphylococcus Aureus after Transcatheter Aortic Valve Replacement

Transcatheter aortic valve classification:

1. Balloon-expandable: Edwards Sapien™, Sapien XT™, and Sapien 3™ valves systems; Edwards Lifesciences, Irvine, CA, USA.
2. Self-expanding or mechanically-expandable: Medtronic CoreValve™ and Evolut R™ systems [Medtronic, Minneapolis, MN], Lotus™ Valve System [Boston Scientific, Marlborough, MA, USA], Portico™ valve [Abbott Vascular, Abbott Park, IL, USA], Symetis Accurate™TA and neo valve system [Symetis SA, a Boston Scientific company, Ecublens, Switzerland], Direct flow™ [Direct Flow Medical Inc. Santa Rosa, CA, USA], JenaValve™ [JenaValve Technology Inc. Irvine, CA, USA], Medtronic Engager™ [Medtronic, Minneapolis, MN, USA] and Centera™ [Edwards Lifesciences, Irvine, California, USA]

Supplementary Table S1. Factors associated with *S aureus* as causative microorganism in patients with IE post-TAVR.

	Univariate Analysis OR (95% CI)	Unadjusted p Value	Multivariate Analysis OR (95% CI)	Adjusted p Value
Baseline and TAVR features				
Antibiotic Prophylaxis (TAVR)				
B-Lactam alone	1.86 (1.05-3.29)	0.034	-	-
Other	1 [Reference]		-	-
In-hospital Outcomes (TAVR)				
Stroke	2.82 (1.27-6.25)	0.011	-	-
Major Bleeding	1.97 (1.09-3.55)	0.025	2.82 (1.24-6.43)	0.013
Major vascular complication	1.82 (0.92-3.61)	0.086	-	-
Acute renal failure	2.07 (1.23-3.50)	0.006	-	-
Sepsis	2.51 (1.41-4.45)	0.002	2.31 (1.13-4.72)	0.021
Healthcare-associated IE	1.65 (1.13-2.42)	0.010	-	-
Symptoms at IE admission				
Fever	1.64 (0.98-2.76)	0.060	-	-
Neurological	2.00 (1.27-3.15)	0.003	2.16 (1.19-3.92)	0.011
Systemic embolism	1.91 (1.13-3.24)	0.015	2.06 (1.04-4.08)	0.038
Structure involved				
Vegetation	0.57 (0.39-0.85)	0.006	-	-
Isolated TAVR prosthesis	0.67 (0.44-1.04)	0.074	-	-
Cardiac device involvement	3.29 (1.65-6.59)	0.001	4.50 (1.93-10.54)	0.001

TAVR, transcatheter aortic valve replacement

Supplementary Table S2. Factors associated with cumulative follow-up mortality in patients with infective endocarditis caused by *S aureus* after TAVR.

	Univariate Analysis Hazard Ratio (95% CI)	Unadjusted p Value	Multivariate Analysis Hazard Ratio (95% CI)	Adjusted p Value
Baseline and TAVR features				
Logistic EuroSCORE ^a	1.03 (1.01-1.05)	0.008	1.05 (1.02-1.08)	0.001
Concomitant mitral regurgitation	1.52 (0.97-2.38)	0.070	-	-
Mean transaortic gradient	0.98 (0.97-1.00)	0.014	-	-
Approach				
Transfemoral	0.53 (0.26-1.11)	0.093	-	-
Other	1 [Reference]	-	-	-
In-hospital Outcomes (TAVR)				
Residual aortic regurgitation >2	1.67 (0.94-2.96)	0.094	-	-
Major Bleeding	1.89 (1.11-3.21)	0.019	-	-
Sepsis	1.71 (1.00-2.91)	0.048	-	-
Acute renal failure	1.74 (1.08-2.80)	0.022	-	-
IE clinical characteristics				
Heart failure at IE admission	1.49 (0.98-2.28)	0.065	-	-
IE with TAVR involvement ^b	0.89 (0.59-1.34)	0.578	0.78 (0.45-1.36)	0.387
Management				
Surgery at index IE hospitalization ^b	0.66 (0.38-1.15)	0.139	0.46 (0.22-0.96)	0.038
In-hospital complication				
Heart failure	2.19 (1.39-3.45)	0.001	-	-
Acute renal failure	3.25 (1.94-5.43)	<0.001	1.72 (0.89-3.31)	0.105
Septic shock	5.59 (3.50-8.92)	<0.001	2.84 (1.54-5.25)	0.001
Persistent bacteremia	3.97 (2.36-6.68)	<0.001	3.90 (1.98-7.69)	<0.001

TAVR, transcatheter aortic valve replacement.

^a Per 1% increase.

^b Variable was forced to remain in the final model.