



SHORT- AND MID-TERM OUTCOMES AFTER TRANSCATHETER AORTIC VALVE REPLACEMENT IN PATIENTS WITH RENAL INSUFFICIENCY NOT ON HEMODIALYSIS

Poster Contributions
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Background: Outcomes after transcatheter aortic valve replacement (TAVR) in patients with renal insufficiency but not on dialysis remain uncertain.

Methods: Retrospective chart review identified 209 patients who underwent TAVR between September 2014 and September 2015. Of these patients, 5 (2.4%) were excluded for history of hemodialysis. Of the 204 patients, 106 (52%) had glomerular filtration rate (GFR) <60 mL/min/1.73m² and 98 (48%) had GFR >60 mL/min/1.73m² on clinical laboratory testing. Outcomes were defined by the valve academic research consortium-2 criteria when applicable and compared between low and normal GFR groups via test of proportions. Median follow-up was 353 days. Continuous data are shown as median [interquartile range] and categorical data are shown as proportions.

Results: The 30-day mortality risk by Society of Thoracic Surgery score was significantly higher in the low versus high GFR groups (6.7% [5.2-8.9] vs 5.2% [3.4-7.0], p<0.001), while contrast use was significantly lower in the low versus normal GFR groups (34 mL [26-45] vs 43 mL [32-59], p=0.003). There were no significant differences in outcomes (Table).

Conclusions: In a high-volume center the rate of adverse outcomes, including acute renal failure, was overall low with no significant difference between non-dialysis patients with low versus high baseline GFR undergoing TAVR. Procedural modifications may allow for judicious use of contrast without an increase in adverse outcomes in patients with low GFR.

Table. Outcomes After TAVR in Patients with Renal Insufficiency not on Dialysis

	Low Glomerular Filtration Rate (n=106)	High Glomerular Filtration Rate (n=98)	p-value
Intra-procedural complications			
Conversion to alternative access	0	0	-
Femoral artery rupture	0	0	-
Annulus rupture	0	0	-
Device Malfunction	0	0	-
Device Migration	0	2 (2.0%)	0.23
Device Embolization	0	0	-
Ectopic Valve Deployment	0	0	-
Valve-in-valve	0	2 (2.0%)	0.23
Valve thrombosis	0	0	-
Coronary Artery Obstruction	0	0	-
Cardiac tamponade	1 (0.9%)	1 (1.0%)	1.0
Heart block	5 (4.7%)	7 (7.1%)	0.56
In-hospital complications			
Paravalvular regurgitation			0.70
None	26 (24.5%)	19 (19.4%)	
Trace	38 (35.8%)	41 (41.8%)	
Mild	37 (34.9%)	34 (34.7%)	
Moderate	5 (4.7%)	3 (3.1%)	
Severe	0	0	
Permanent pacemaker	20 (18.9%)	14 (14.3%)	0.45
Myocardial infarction	0	0	-
Cardiac arrest	0	1 (1.0%)	0.48
New atrial fibrillation	2 (1.9%)	2 (2.0%)	1.0
Aortic dissection	0	1 (1.0%)	0.48
Cardiac tamponade	2 (1.9%)	2 (2.0%)	1.0
Stroke	4 (3.8%)	1 (1.0%)	0.37
Major vascular complications	0	1 (1.0%)	0.48
Acute renal failure-Stage 1	2 (1.9%)	0	0.50
Acute renal failure-Stage 2	0	0	-
Acute renal failure-Stage 3	0	0	-
Life-threatening, disabling, or major bleeding	4 (3.8%)	3 (3.1%)	1.0
In-hospital all-cause mortality	4 (3.8%)	1 (1.0%)	0.37
All-cause mortality on follow-up (median [interquartile range] of 353 days [84-462])	11 (10.4%)	4 (4.1%)	Log rank p=0.1