



Valvular Heart Disease

IMPACT OF ETIOLOGY OF PULMONARY HYPERTENSION ON POST-PROCEDURAL MANAGEMENT AND OUTCOMES IN PATIENTS UNDERGOING TRANSCATHETER AORTIC VALVE REPLACEMENT

Moderated Poster Contributions

Poster Sessions, Expo North

Saturday, March 09, 2013, 3:45 p.m.-4:30 p.m.

Session Title: TAVR I: Predictors of TAVR Outcomes Including LVEF, Contractile Reserve, BNP, Pulmonary HTN, CA 125, and Fever

Abstract Category: 32. Valvular Heart Disease: Therapy

Presentation Number: 1156M-88

Authors: *Ryan K. Kaple, Sean Wilson, Polydoros Kampaktis, Amiran Baduashvili, Micheas Zemedkun, Htoo Kyaw, Geoffrey Bergman, Robert Minutello, Richard Devereux, Arash Salemi, Karl Krieger, Evelyn Horn, Shing-Chiu Wong, Fay Lin, New York Presbyterian Hospital - Weill Cornell, New York, NY, USA*

Background: Pulmonary hypertension (PH) may arise from both pre-capillary and post-capillary etiologies among patients undergoing transcatheter aortic valve replacement (TAVR). The impact of PH etiology upon post-procedural management and outcomes post TAVR is unknown.

Methods: We compared post-procedural management and outcomes after TAVR by the European Society of Cardiology PH classification: No PH (mean pulmonary artery pressures (mPA) <25 mm Hg); pre-capillary PH (mPA \geq 25 and pulmonary capillary wedge pressure (PCWP) <15; post-capillary passive PH (mPA \geq 25, PCWP \geq 15 and transpulmonary gradient (TPG) \leq 12), and post-capillary reactive PH (mPA \geq 25, PCWP \geq 15 and TPG >12).

Results: 87 patients underwent TAVR (Age = 87+/-6, 59% female, 65% transfemoral, 50% with depressed LVEF<55%). 35% of patients had no PH, 8% had pre-capillary, 20% post-capillary passive, and 38% post-capillary reactive PH. After TAVR, 17% of patients required milrinone, 3% required dobutamine, and 67% required pressors. Patients with pre-capillary PH had significantly longer time to discharge compared to other groups (Fisher's LSD <0.01, Table) There was no significant difference in intubation time, ICU time or 1-year mortality.

Conclusion: Patients with pre-capillary PH require longer time to discharge after TAVR compared with those with other etiologies of PH or no PH. PH etiology should be considered when planning postprocedural management for TAVR.

	No PH (N=30) % or mean (SD)	Pre- capillary (N=7) % or mean (SD)	Post- capillary passive (N=17) % or mean (SD)	Post- capillary reactive (N=33) % or mean (SD)	P (ANOVA)
Net I/O (L)	1.0 (1.1)	1.4 (0.7)	1.1 (0.9)	1.4 (0.8)	0.65
Pressors	77%	20%	44%	76%	0.03
Milrinone	9%	20%	11%	25%	0.52
Dobutamine	0%	0%	11%	8%	0.48
Iloprost	0%	0%	0%	4%	0.71
Sildenafil	0%	0%	0%	4%	0.71
Intubation time (hrs)	15 (10)	26 (20)	13 (10)	24 (22)	0.19
ICU time (hrs)	100 (135)	154 (168)	63 (25)	179 (535)	0.74
Days to discharge	7.0 (5.7)	13.6 (9.6)	4.6 (2.1)	7.0 (3.3)	0.01
1-year mortality	7%	29%	29%	27%	0.14