THE ASSOCIATION OF PRIMARY ANESTHESIA TYPE WITH POSTOPERATIVE ADVERSE EVENTS FOLLOWING MINIMALLY INVASIVE TRANSCAROTID ARTERY REVASCULARIZATION

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INTRODUCTION

The anesthesia literature remains sparse regarding influence of primary anesthesia type with adverse events following minimally invasive transcatheter aortic valve replacement (TAVR).¹ The objective was to report the association of primary anesthesia type with 30-day adverse events following TAVR.

RESULTS

Final analysis included 625 patients. The prevalence of regional anesthesia/MAC was 73.4%. We observed a 93% decrease in the odds of 30-day mortality ($p=0.018$) in patients who received regional anesthesia/MAC. Mean [SD] hospital stay (2.99 [5.92] days versus 4.30 [9.15] days, $p=0.037$) and case duration (88.45 [39.48] minutes versus 105.85 [63.77] minutes, $p<0.001$) were shorter among patients who received regional anesthesia/MAC. Pulmonary complications were lower in the regional/MAC group ($p=0.021$).

DISCUSSION

The majority of studies on this topic pertain to carotid endarterectomy patients, this analysis sheds light on outcomes following TAVR. Overall, we urge further risk stratification and pre-procedural optimization to carefully select patients who may undergo regional/MAC.

METHODS

The American College of Surgeons National Surgical Quality Improvement Program registry from 2012 to 2016 was used for this retrospective study. The primary exposure was anesthesia type (regional/MAC versus general anesthesia). Primary endpoint was 30-day mortality. Secondary 30-day endpoints included pulmonary, renal, and cardiac complications, sepsis, DVT, stroke, transfusion, thrombosis of ipsilateral carotid vessel, reoperation. Logistic regression was used to evaluate the association of anesthesia type with adverse events.

	Primary Anesthesia		P Value
	General Anesthesia	Regional/MAC	
Sample No. (%)	166	459	
Hospital stay (days), mean (SD)	4.30 (9.15)	2.99 (5.92)	0.037
Case Duration (minutes), mean (SD)	105.85 (63.77)	88.45 (39.48)	<0.001
Pulmonary Complications	8 (4.8)	6 (1.3)	0.021
Pneumonia	6 (3.6)	5 (1.1)	0.076
Mechanical Ventilation	3 (1.8)	3 (0.7)	0.400
Reintubation	5 (3.0)	5 (1.1)	0.183
PE	1 (0.6)	0 (0.0)	0.595
Sepsis Complication	3 (1.8)	1 (0.2)	0.103
Sepsis	2 (1.2)	1 (0.2)	0.357
Septic Shock	1 (0.6)	0 (0.0)	0.595
Renal Complications	2 (1.2)	3 (0.7)	0.861
UTI	1 (0.6)	2 (0.4)	1.00
Renal Insufficiency	1 (0.6)	0 (0.0)	0.595
AKI	0 (0.0)	1 (0.2)	1.00
DVT	3 (1.8)	0 (0.0)	0.026
CVA	9 (5.4)	15 (3.3)	0.316
Cardiac Complications	2 (1.2)	10 (2.2)	0.650
MI	1 (0.6)	10 (2.2)	0.327
CPR	1 (0.6)	0 (0.0)	0.595
Infection	0 (0.0)	1 (0.2)	1.00
Superficial SSI	0 (0.0)	1 (0.2)	1.00
Blood Transfusion	13 (7.8)	15 (3.3)	0.027
Embolism/Thrombosis	4 (2.4)	4 (0.9)	0.268
Reoperation	8 (4.8)	13 (2.8)	0.334
Death	6 (3.6)	3 (0.7)	0.018

REFERENCES

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