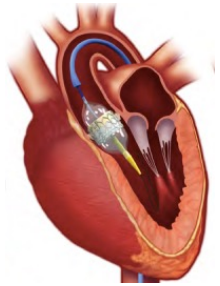
Gastrointestinal Bleeding after Transcatheter Aortic Valve Replacement

Ann F Kopera, DO[1], Mark Brahier, MD[1], Shwetha Kochi, BS[1], Jeffrey Riskin, BS[1], Kavya Sanghavi, MPH[2], Jose D Vargas, MD[1], Monvadi B Srichai, MD[1], Shervin Shafa, MD[1]

MedStar Georgetown University Hospital, Washington, DC
MedStar Health Research Institute Center for Biostatistics, Washington, DC

Introduction

- Gastrointestinal bleeding (GIB) is the most common cause of late bleeding after transcatheter aortic valve replacement (TAVR), a procedure used to treat aortic valve stenosis
- This study sought to determine the incidence, risk factors, and outcomes of post-TAVR GIB up to one-year post-procedure



Methods

- A retrospective review was conducted which included 844 patients who underwent transfemoral TAVR between 2015-2020
- The incidence of upper and lower GIB up to one-year follow up, demographics, medications, and baseline comorbidities were reviewed

Table 1: Characteristics of post-TAVR GIB

N (%) for binary variables Median (IQR) for continuous variables			
	No GIB N=805	GIB N=39	p-value
Patient Demographics			
Female sex	454 (56.4%)	15 (38.5%)	0.028
Age	79.6 (72.9-84.9)	78.3 (71.3-84.7)	0.37
BMI	28.5 (25.0-33.2)	28.7 (24.8-33.8)	0.798
Comorbidities			
Baseline hemoglobin	12.1 (10.8-13.4)	10.8 (9.4-12.4)	<0.001
Baseline MCV	91.9 (88.4-95.2)	90.4 (84.1-95.5)	0.425
Baseline creatinine	1.0 (0.81-1.3)	1.01 (0.78-1.5)	0.478
CKD	196 (24.3%)	16 (41.0%)	0.019
GI bleed history	23 (2.9%)	4 (10.3%)	0.01
CAD	573 (71.2%)	30 (76.9%)	0.438
PAD	100 (12.4%)	9 (23.10%)	0.053
HTN	528 (65.6%)	29 (74.4%)	0.259
HLD	558 (69.3%)	30 (76.9%)	0.313
Diabetes	282 (35.0%)	18 (46.2%)	0.156
Medications Post-TAVR			
DAPT	286 (35.5%)	13 (33.3%)	0.78
Anticoagulation	271 (33.9%)	13 (34.2%)	0.97
Triple therapy	44 (5.5%)	1 (2.6%)	0.431
PPI	241 (30.2%)	20 (52.6%)	0.003
H2 Antagonist	100 (12.5%)	8 (21.1%)	0.125
1 Year Outcomes			
Any bleed	99 (12.3%)	39 (100%)	<0.001
Major bleeds	33 (33%)	24 (62%)	0.0024
Stroke	36 (4.5%)	4 (10.3%)	0.097
Myocardial infarct	22 (2.7%)	1 (2.6%)	0.95
Death	32 (4.0%)	4 (10.3%)	0.058

Results

- The incidence of GIB was 4.6% (n= 39)
- GIB was more likely to have occurred after discharge from TAVR hospitalization (82% vs. 41%, p<0.0001)
- GIB were more often classified as major or life-threatening (62% vs 33%; p=0.0024) compared to patients with other sites of bleeding
- Risk factors for GIB included triple therapy [OR 2.88 (95% CI: 1.04-7.97) p=0.042], and severe anemia [HR 4.83 (95% CI: 2.15-10.84) p<0.001]

Discussion

- **Post-TAVR GIB is more likely to occur after TAVR hospitalization and more likely to be classified as a major or life-threatening bleed**
- **Triple therapy and severe baseline anemia are predictors of post-TAVR GIB**