**CLINICAL CHARACTERISTICS AND OUTCOMES IN PATIENTS UNDERGOING TRANSCATHETER AORTIC VALVE REPLACEMENT WITHOUT LVH BY VOLTAGE CRITERIA**

R. Zhang, **K. Keller**, S. Jou, A. Nappi, M. El-Hajjar, A. Delago, M. Torosoff

Albany Medical Center, Albany, NY, USA

**Background**: Left ventricular hypertrophy (LVH) is expected in patients with critical aortic stenosis undergoing TAVR. Clinical implications of normal voltage ECG in patients undergoing TAVR have not been investigated.

**Methods**: A retrospective chart review was conducted in 401 consecutive TAVR patients without ventricular-paced rhythm. LVH was diagnosed by Sokolow-Lyon and Cornell voltage criteria. Clinical data and outcomes were adjudicated according to TAVR registry definitions.

**Results**: Patients were 81.5±8.4 years old, 58% female, 45% with a hx of tobacco use, 86% with HTN, 29% with PVD, 16% with a hx of CVA, 84% with hyperlipidemia 41% with atrial fibrillation (AF), and 32% with COPD. Only 47% of patients met either Sokolow-Lyon or Cornell criteria for LVH.

Patients without ECG LVH were more likely to be younger (80.2±8.6 vs. 83.3±7.9 years old, p<0.001), males (64.9 vs. 43.3% in females, p<0.001), smokers (51.5 vs. 38.7%, p=0.01) with history of AF (46 vs. 36% p=0.045) and a trend towards increased COPD prevalence (37 vs. 28%, p=0.054). There was no difference in LV ejection fraction (EF) (50±10.5 vs. 49.1±11.3%, p=0.476), aortic valve gradient (38.8±17.2 vs. 38.1±19.2 mmHg, p=0.752) and area (0.9±0.6 vs. 0.8±0.3 cm2, p=0.104), or TSH levels (2.2±3 vs. 2.1±2.2 µIU/mL, p=0.729).
RBBB was more prevalent in patients without ECG LVH (14.6 vs. 4%, p<0.001). In patients without LVH by voltage criteria, new post-TAVR permanent pacemaker (PPM) was needed in 30% when RBBB was present and in 14% when RBBB was not present (p=0.04). In patients with ECG LVH, new post-TAVR PPM was needed in 17% when RBBB was present and in 20% when RBBB was not present (p=0.820).

**Conclusion**: Significant proportion of patients undergoing TAVR do not have ECG evidence for LVH. LV EF, aortic valve area and gradient are not affected by absence of ECG LVH. Patients without LVH by voltage criteria are more likely to be younger men, with a history of smoking and AF, and with increased prevalence of RBBB. Post-TAVR permanent pacemaker was needed more frequently when baseline RBBB was present in patients without LVH by voltage criteria. Prospective investigation of this interesting and potentially important finding is needed.