CLINICAL IMPACT OF NEW-ONSET PERSISTENT LEFT BUNDLE BRANCH BLOCK FOLLOWING TRANSCATHETER AORTIC VALVE IMPLANTATION WITH A BALLOON-EXPANDABLE VALVE

Moderated Poster Contributions
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Objectives: To determine the impact of new-onset persistent left bundle branch block (NOP-LBBB) on late clinical outcomes in patients undergoing transcatheter aortic valve implantation (TAVI) with a balloon-expandable valve (BEV)

Background: The clinical impact of the occurrence of NOP-LBBB following TAVI remains controversial, and very few data exist on patients who had received a BEV.

Methods: A total of 902 consecutive patients who underwent TAVI with a BEV in 4 centers were included. ECGs were recorded at baseline, immediately after the procedure and daily until hospital discharge. Patients were followed at 1 and 12 months, and yearly thereafter. Mortality at any time was prospectively collected and further classified as cardiovascular or non-cardiovascular following the VARC criteria. The indications for permanent pacemaker implantation (PPI) were symptomatic severe bradycardia or high degree atrio-ventricular block.

Results: New-onset LBBB occurred in 128 patients (18.8% of patients without prior PPI or LBBB) immediately after TAVI, and persisted at hospital discharge in 67 patients (52.3%; 9.8% of the patients at risk). Patients with NOP-LBBB were younger compared to those without (78 ± 9 vs. 81±8 years, p=0.007). At a median follow-up of 13 (4-25) months, the mortality rate was 28.8%, with no differences between NOP-LBBB and no NOP-LBBB groups (25.4% vs. 29.1%, HR: 0.75 [0.46-1.23], p=0.250; p = 0.206 after adjusting for age differences). There were no differences between groups regarding cardiovascular mortality (NOP-LBBB: 19.4%, no NOP-LBBB: 17.6%, HR: 0.96 [0.55-1.70], p=0.893; p=0.700 after adjusting for age differences) or sudden death (NOP-LBBB: 1.5%, no NOP-LBBB: 1.0%, HR: 1.42 [0.18-11.33], p=0.743; p=0.814 after adjusting for age differences). In patients discharged alive without PPI, NOP-LBBB was associated with an increased rate of PPI during the follow-up period (9.7% vs.1.6%, HR: 4.88 [1.77-13.46], p=0.002; p=0.004, after adjusting for age differences).

Conclusion: NOP-LBBB occurred in about 1 out of 10 patients undergoing TAVI with a BEV. NOP-LBBB was associated with a higher rate of PPI but not global or cardiovascular mortality at 1-year follow-up.