

VALVULAR DISEASE

Implications of new-onset conduction abnormalities after TAVI

Conduction abnormalities, such as left bundle branch block (LBBB), commonly occur after transcatheter aortic valve implantation (TAVI). Such complications might impair the benefits of TAVI, but do not necessarily increase mortality.

Marina Urena and colleagues studied 668 consecutive patients undergoing TAVI with a balloon-expandable valve. None of the patients had pre-existing LBBB or a pacemaker. New-onset LBBB occurred in 19.2% of patients immediately after the procedure, and was sustained until discharge from hospital in 11.8%. At the end of follow-up (median 13 months), new-onset LBBB was associated with an increased rate of permanent pacemaker implantation (PPI; 13.9% versus 3.0%; HR 4.29, 95% CI 2.03–9.07, $P < 0.001$), as well as a lack of improvement in left ventricular ejection fraction and a reduced NYHA functional class. However, no difference was observed in all-cause

mortality between patients who developed LBBB and those who did not (27.8% versus 28.4%; HR 0.87, 95% CI 0.55–1.37). Similarly, no differences were reported in cardiovascular mortality, or in the rates of sudden death, all-cause rehospitalization, or heart failure.

In an accompanying editorial, Laurent Roten and Bernhard Meier recommend vigilance for the onset of LBBB after TAVI and that “these patients should proactively undergo PPI. PPI is a safe and rapid procedure that reliably prevents syncope or bradyarrhythmic sudden cardiac death with minimal adverse effects on long-term outcome.”

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Original article Urena, M. *et al.* Impact of new-onset persistent left bundle branch block on late clinical outcomes in patients undergoing transcatheter aortic valve implantation with a balloon-expandable valve. *JACC Cardiovasc. Interv.* doi:10.1016/j.jcin.2013.08.015