**PERMANENT PACEMAKER (PPM) INSERTION IN PATIENTS WITH CONDUCTION ABNORMALITIES POST TRANSCATHETER AORTIC VALVE REPLACEMENT (TAVR): A REVIEW AND PROPOSED GUIDELINES**

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**Background:**Conduction abnormalities are a common complication of TAVR with established predictive factors. Current guidelines are not concrete, leaving several questions unanswered about PPM implantation post-TAVR. A small subset of these patients are PPM dependent at one year post-TAVR, while patients are still at a hemodynamic disadvantage. It is incumbent to develop guidelines for risk stratification, procedure selection, monitoring and recommending PPM implantation post-TAVR.

**Methods:**60 peer-reviewed articles including American College of Cardiology (ACC) and European Society of Cardiology (ESC) guidelines, prospective randomized trials, retrospective studies, meta-analyses and expert opinion articles published from 1999-2017 were researched using SCOPUS, EMBASE and MEDLINE. Studies reporting pathophysiology, predictors and clinical implications of conduction abnormalities post-TAVR were reviewed.

**Results:**The highest risk of persistent complete heart block (CHB) is linked to pre-existing right bundle branch block (RBBB), heavily calcified left ventricular outflow tract (LVOT) and a short membranous septum. Increasing TAVR to aortic annulus oversizing ratios is associated with an increase in PPM implantation. TAVR depth less than 6 mm and placement higher in the LVOT shows a lower trend in conduction abnormalities. Risk is higher with self-expanding valves compared to balloon expandable valves (BEV). While no ACC guidelines exist, the ESC recommends that PPM implants be considered only in patients with CHB and high grade atrio-ventricular block that persist 7 days post-TAVR. The predictive ability of electrophysiology (EP) testing in those with new left bundle branch block (LBBB) post-TAVR is under utilized.

**Conclusions:**We propose pre-procedure risk stratification and post-procedure monitoring in high-risk patients. We propose procedural modification such as using the BEV and a high depth of implantation. Cardiac EP testing in patients with new onset LBBB should be used to determine the risk of persistent CHB. Early discharge with leadless temporary pacemaker and continuous monitoring in high risk patients post-TAVR will minimize unwanted PPM implantation.