Permanent pacemaker implantation post transcatheter aortic valve replacement- the role of pacing burden

S.S. Natanzon[1], A. Fardman[1], I. Barbash[1], V. Guetta[1], A. Segev[1], E. Maor[1], P. Fefer[1], E. Nof[1], N. Koren-Morag[2], R. Beinart[1]

[1]*Chaim Sheba Medical Center, Lev and Olga Leviev Heart Center, Sheba Medical Center, Tel Hashomer, Israel, Tel Hashomer, Israel;* [2]*Tel Aviv University, Sackler School of Medicine, Tel Aviv, Israel*

Funding Acknowledgement: Type of funding sources: None.

Introduction: Previous studies have provided inconsistent results regarding the clinical impact of new permanent pacemaker (PPM) post TAVR. Our aim is to evaluate whether new PPM post TAVR is associated with higher 1-year mortality and/or heart failure hospitalizations and whether pacing burden is related to adverse outcomes.

Results: Overall, 1245 patients underwent TAVR between the years 2008–2019 and were included in our analysis with a median follow up of 2.3 years (IQR 1–4). 191 (15%) had a new PPM implantation during index admission. Compared to patients without PPM those implanted had significantly higher 1-year mortality rate (18% vs 11%, p-0.007) as well has higher combined outcome of mortality and HF hospitalizations. There was no difference in pacing burden between survivors and non survivors in all models examined: first and last clinic visit, maximal pacing during the first-year post implantation and the difference in pacing trend between visits. Older age, peripheral artery disease (PAD) and previous myocardial infarction (MI) were independently associated with mortality or combined outcome of mortality and HF hospitalizations.

Conclusion: New pacemaker implantation post TAVR is associated with higher 1-year mortality and HF hospitalization, however pacing burden isn't associated with adverse clinical course.