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Length of hospital stay following temporary pacing post-transcatheter valve replacement

Sean McCarthy

Wayne State University, fw4803@wayne.edu

Marvin Eng M.D.

Henry Ford Health System, meng1@hfhs.org

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Abstract

Transcatheter valve replacement (TVR) provides a minimally invasive method of valve replacement. During TVR, conduction abnormalities can develop, but only some will require permanent pacing, and use of temporary pacing provides immediate support until a decision of temporary pacing is made. Henry Ford Health System has two methods of pacing lead placement: balloon tipped leads and screw-in leads. Currently, the impact of different types of temporary pacing leads on recovery time is still unknown. This project investigated the differences in the length of hospital and ICU stay between patients who received the balloon tipped and screw-in leads. Data was collected from 144 patients who underwent TVR and was analyzed for differences between these two patient groups. We had 44 patients with a balloon tipped lead and 104 patients with a screw in lead. Of the patients who received balloon tipped leads, average length of stay was 10.4 days and number of ICU days was 4.3. For the patients who received Screw in leads, average length of stay was 6.7 days and average number of ICU days was 1.2. Both the length of hospital stay ($p < 0.05$) and number of ICU days ($p < 0.01$) were significant. Our results showed that there was a significant difference in both hospital stay and length of stay in the ICU, and that screw-in lead temporary pacing is correlated with quicker recovery times. Future work should expand the scope to more institutions to evaluate for similar findings.