

## AB037. Permanent pacemaker implantation rates following cardiac surgery in the modern era

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**Background:** The prevalence of permanent pacemaker (PPM) implantation following cardiac surgery had been reported to be between 0.4–6%. The aim of this study was to evaluate the incidence of PPM implantation after cardiac surgery in our institution and investigate risk factors for PPM dependency in order to provide patients with accurate incidence figures at the time of consent for surgery.

**Methods:** Data was collected retrospectively from a single tertiary institution from October 2018–April 2019 inclusive of 403 patients and incidence of PPM implantation after various cardiac operations was evaluated. A univariate analysis was carried out to identify the independent risk factors related to PPM implantation.

**Results:** Ten patients required a PPM (2.48%). The most common indication for PPM implantation post-cardiac surgery was complete heart block (N=7, 70%) followed by bradycardia/pauses (N=2, 20%) and sick sinus syndrome (N=1, 10%). PPM implantation after coronary artery bypass graft (CABG) surgery was the lowest (0.63%) while combined CABG and valve operations had the highest incidence (5.97%). PPM rate post-isolated aortic valve replacement (AVR) was 1.03%. Independent risk predictors for PPM implantation included female gender (P=0.03), rheumatic heart disease (P=0.008), pulmonary hypertension (P=0.01), redo operations (P=0.002), mitral valve procedures (P=0.001), tricuspid valve procedures (P=0.0003) and combined mitral and tricuspid valve procedures (P=0.0001). Average length of ICU/HDU stay was significantly prolonged for patients who required a PPM post-cardiac surgery.

**Conclusions:** As clinicians, it can be challenging to provide our patients with accurate information on the risk of PPM implantation relative to their operation. Hence, a unit-specific data may be a more accurate method of informing our patients on this risk.

**Keywords:** Cardiac surgery; cardiology; permanent pacemaker

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