

AB029. 200. A 15-year review of pacemaker requirement following isolated or concomitant tricuspid valve surgery

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Background: Tricuspid surgery has a risk of post-operative rhythm problems due to the proximity of the heart's conduction system to the tricuspid valve. This may require insertion of a permanent pacemaker (PPM).

Methods: A retrospective review of all patients undergoing tricuspid surgery between 2003 and 2018 in our institution was undertaken. Data was retrieved by database review and patient follow-up attained from up to date regional electronic care records.

Results: A total of 261 patients underwent tricuspid surgery during the study period. Replacement was required in 29, with the remainder having repair. Of the patients undergoing replacement 16 (55.1%) had no PPM requirement throughout the follow-up period. Three

(10.3%) had had a transvenous PPM placed prior to surgery and, in each case, this was replaced with an epicardial system intraoperatively. Eight (27.6%) had a *de novo* epicardial PPM at the time of surgery and, at most recent follow up, 5 (62.5%) of these patients remained pacing dependent. Two patients (6.9%) require post-operative PPM; one via coronary sinus and one epicardial via redo sternotomy. Regarding tricuspid repair (n=229), 5 (2.2%) patients had an AICD and 19 (8.3%) had a PPM *in situ* prior to surgery, with 1 changed to an epicardial system intraoperatively. One patient was upgraded to a biventricular ICD and one had a PPM removed due to infected leads. A total of 20 patients (8.7%) required a post-operative pacing system. The requirement for a pacemaker intra or post-operatively in all patients did not seem to influence long-term survival (P=0.7).

Conclusions: *De novo* pacemaker requirement after tricuspid valve replacement and repair was 27.5% and 8.7%, respectively. There was a 6.9% incidence of complex pacemaker requirement in the post-operative period although this was not frequent enough to mandate routine PPM in all patients.

Keywords: Pacemaker; surgery; tricuspid

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