

**INCIDENCE, PREDICTORS, AND OUTCOME OF POSTOPERATIVE ATRIAL FIBRILLATION IN PATIENTS RECEIVING CONTINUOUS FLOW LEFT VENTRICULAR ASSIST DEVICES**

Poster Contributions
Poster Hall, Hall C
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Background: Postoperative atrial fibrillation (POAF) is associated with increased mortality, morbidity, and length of hospital stay after cardiac surgery. However, the incidence, predictors, and clinical outcomes of POAF in patients undergoing implantation of left ventricular assist devices (LVAD) are not known.

Methods: All patients who underwent LVAD implantation from 2013 to 2014 were included. Medical records and electrocardiograms were reviewed to determine baseline characteristics, arrhythmia incidence, and clinical outcome. Survival, development of atrial fibrillation (AF), and thrombotic complications after LVAD were evaluated using Kaplan-Meier and Cox proportional hazards analyses.

Results: A total of 47 patients with no documented AF were included with a mean age 56.4 ± 12.5 years, 33 (70%) male, 18 (38%) with ischemic cardiomyopathy, 31 (66%) destination therapy, mean left atrial volume index 40.9 ± 13.6 ml/m², mean albumin 3.4 ± 0.4 , and mean creatinine 1.5 ± 0.8 . These patients were followed for a median of 295 days (range 14-722). In the first 30 days of LVAD placement, 13 (28%) patients developed POAF. POAF developed at mean 7.9 ± 8.5 days post LVAD (median 6.0). In 69% of patients with POAF, AF did not recur after 30 days of the surgery. However, POAF was predictive of development of new AF after 30 days of LVAD placement in patients without prior history of AF (31% vs 5.8%). Obstructive lung disease was the only predictor of POAF. POAF was not associated with increased length of stay, stroke, or device thrombosis within 30 days. Also, POAF had no effect on 30 day or long term mortality. However, in long term follow up POAF was associated with increased risk of ischemic stroke and device thrombosis ($p < 0.05$). These thrombotic associations remained significant when correcting for age, gender, diabetes mellitus, hypertension, valve disease, left atrial volume index and history of ischemic cardiomyopathy.

Conclusions: POAF is common after LVAD. Unlike in other cardiac surgery populations POAF does not have negative impact on early postoperative morbidity or mortality. In the long term, POAF is a significant risk factor for the development of AF, ischemic stroke, and device thrombosis.