"New-onset atrial fibrillation after cardiac surgery is associated with increased long-term morbidity and mortality": a population-based study from the SWEDHEART-registry.

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Topic(s):
Cardiovascular Surgery – Arrhythmias

Citation:
Background: New-onset postoperative atrial fibrillation (POAF) is a common complication after cardiac surgery, but the prognostic implications are not settled. In contrast to previous reports, a recent Danish study in coronary bypass surgery (CABG) patients (Butt et al. JAMA Cardiol 2018) did not show any increased risk for thromboembolic complications in POAF patients.

Purpose: To compare long-term outcome in patients with vs. without POAF after CABG.

Methods: All CABG patients in Sweden 2005-2015 (n=38040) were included in a retrospective population-based cohort study. Data from the SWEDHEART registry, the National Patient Registry and the National Population Registry were merged. POAF was defined as any new-onset atrial fibrillation (AF) episode up to the 30th postoperative day. Inverse Probability Treatment Weighting (IPTW) adjusted Cox regression models were used to compare outcome variables after the first 30 postoperative days until the end of follow-up (median 5 years, range 0-10). The models were adjusted for age, gender, CHA2DS2-VASc score, comorbidity, and medications.

Results: The mean age of the entire cohort was 68 years, 79% were men and 90% had a CHA2DS2-VASc score =2. The incidence of POAF was 28.5% (10845/38040). During follow-up POAF, patients had a significantly higher adjusted risk for all-cause mortality [Hazard Ratio (HR) 1.16 (95% CI 1.09-1.24)], ischemic stroke [HR 1.19 (1.09-1.30)], transient ischemic attack [HR 1.17 (1.03-1.33)], pulmonary embolism [HR 1.24 (1.01-1.54)], myocardial infarction [HR 1.14 (1.04-1.25)], heart failure hospitalizations [HR 1.46 (1.35-1.59)] and recurrent AF [HR 4.33 (4.09-4.65)].

Conclusions: POAF was in this comparatively large study associated with increased risk for mortality and morbidity during long-term follow-up after CABG and is hence not a trivial complication.
Abstract: "New-onset atrial fibrillation after cardiac surgery is associated with increased long-term morbidity and mortality": a population-based study from the SWEDEHEART registry.

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![Incidence rates per 100 patient years](image-url)