



## 21. PREVALENCE OF POAF FOLLOWING CARDIAC SURGERY AND COMPARATIVE STUDY ON THE PREFERRED TREATMENT MODALITIES

**Author:** Joy Anugrah

**Scientific advisor:** Tcaciuc Angela, MD, PhD, Associate Professor, Discipline of Cardiology, Department of Internal Medicine, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction.** Postoperative atrial fibrillation (POAF) is a common arrhythmia after cardiac surgery, with an incidence ranging from 10-65%. It is more common in older patients and non-cardiac surgery patients. POAF usually develops between day 2 and 4, with the maximum incidence on day 2. Risk factors include age, hypertension, obesity, diabetes, inflammation, and longer pump and cross clamp times. Stroke is the most significant clinical outcome, and female gender is a risk factor for cardiovascular disease.

**Aim of study.** This literature review is investigating the prevalence outcome and management of POAF following cardiac surgery.

**Methods and materials.** The study included articles published in English, cohort studies, randomized controlled trials and management in cardiac surgery for POAF. Search was conducted filtering articles based on the keywords "Postoperative Atrial Fibrillation," "POAF following cardiac surgery," "POAF management," etc. on databases (PubMed, Google Scholar, Embase, Cochrane...etc.).

**Results.** The review analyzed 1849 studies, excluding duplicates, ineligible records, and 1338 records. After evaluating 396 studies, 40 were included, with 346 deemed eligible. The study found apixaban and edoxaban are more effective than rivaroxaban in treating POAF. POAF was linked to increased risk of death in men but not in women. The AF recurrence rate was higher in cardiac surgery patients (CS) compared to non-cardiac surgery patients (NCS). In long-term follow-up, CVA was more common in patients with POAF after CS compared to NCS. Atrial fibrillation occurred in a higher percentage of patients in the landiolol group compared to the control group. Most patients with POAF had a history of hypertension and diabetes mellitus, with male predominance. Vitamin D treatment reduced the risk of POAF development by 0.24 times. Atrial fibrillation developed after CABG in 156 patients, with patients with POAF generally older and more often presenting comorbidities. New-onset POAF was independently related to the presence and number of fQRS in patients undergoing CABG surgery.

**Conclusion.** The different aspects of POAF facilitate an all-inclusive approach for factors such as gender disparity, surgical methods, anticoagulant choice, etc. The gathered outcomes from these studies deliver helpful data for clinicians, focusing on the need for individual risk management and treatment methods to decrease the effect of POAF on patients.