

ATRIAL FIBRILLATION RATE AND RELATIONS BETWEEN COMPLICATIONS AFTER A CORONARY BYPASS GRAFTING SURGERY

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INTRODUCTION

Atrial fibrillation (AF) is one of the most common complications after cardiac surgery. Studies show that incidence of AF has been found to be 25% after isolated coronary artery bypass grafting (CABG) and 40-50% in complex CABG/ heart valve replacement surgery. However, its effect on outcome is not clearly documented.

AIM

The aim of the study was to determine the frequency of perioperative atrial fibrillation and its association with postoperative complications and duration of hospitalization in patients undergoing CABG.

METHODS

The study includes patients operated between from January 1st, 2021 to February 28th, 2021. Clinical and laboratory data of 100 patients were collected retrospectively and analysed who underwent cardiac CABG with cardiac pulmonary bypass (CPB) that were treated in the LUHS Kaunas Clinics, Clinic of Cardiothoracic and Vascular Surgery. Patients were divided into 2 groups: Group I with AF in perioperative period (n=45), Group II (n=55) with no AF cases in perioperative period. Statistical analyses were performed using SPSS (Statistical Package for the Social Sciences) version 22.0. The value of $p < 0.05$ was considered as significant.

RESULTS

The study population was 100 patients: 57 male and 43 females. The mean age was 66.3 (± 10.2) years old. There were 13% of patients operated as a matter of urgency, 87% were scheduled.

Table 1. Atrial fibrillation frequency after CABG

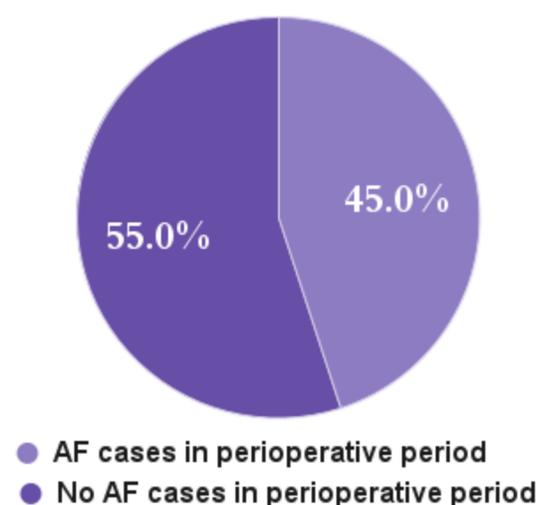


Table 2. Risk factors and complications

| Variable | Group 1 (n=45) | Group 2 (n=55) | P |
|------------------------------------|----------------|----------------|------------|
| Diabetes Mellitus (n,%) | 15 (33.4) | 20 (36.3) | $p > 0,05$ |
| Hypertension (n,%) | 21 (46.6) | 24 (43.6) | $p > 0,05$ |
| Tobacco Consumption (n,%) | 11 (24,4) | 12 (21,8) | $p > 0,05$ |
| Preoperative β blocker (n,%) | 28 (62,2) | 33 (60) | $p > 0,05$ |
| Preoperative statin (n,%) | 33 (73.3) | 44 (80) | $p > 0,05$ |
| LVEF (%) | 50 (25-60) | 55 (20-60) | $p > 0,05$ |
| LVEF <35% | 5 | 5 | $p > 0,05$ |
| Infectious complications | 3 (7) | 2 (3) | $p > 0,05$ |
| Postoperative renal failure | 3 (7) | 1 (2) | $p > 0,05$ |
| Pulmonary complications | 3 (7) | 2 (4) | $p > 0,05$ |

Atrial fibrillation (AF) after CABG is a common complication, accounting for a total of 45% of patients (Table 1.) of whom 36% were new-onset atrial fibrillation.

There was a positive, weak statistically significant association between AF and age ($r = 0.40$; $p = 0.045$), indicating that the incidence of AF in the postoperative period increases significantly in those aged ≥ 65 years. Also, atrial fibrillation were associated with prolonged stay in the intensive care unit (2.0 vs. 3.6 days; $p < 0.05$), and prolonged hospital stay (6 vs. 9 days; $p < 0.05$). According to our data there was no correlation between AF risk factors and postoperative complications (Table 2).

CONCLUSIONS

This study suggests that AF is a common complication after heart surgery. Patients with AF episodes have significantly longer hospitalisation in ICU especially pts older than 65 years of age but they have no greater risks of postoperative complications.