OC20: Predictive factors for incidence of atrial fibrillation after cardiac surgery

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Introduction: Atrial fibrillation (AF) has been described as the arrhythmia with higher incidence in postoperative period and follow-up of cardiac surgery.

Objectives: To study the incidence of AF after cardiac surgery and explore the relationship between this incidence and the main predictive factors.

Materials and Methods: Retrospective observational study. Cardiac rhythm was evaluated in four moments (end of cardiopulmonary bypass (CPB), intensive care unit/hospitalization, pre hospital discharge, follow-up). Main preoperative predictive factors were: age, sex, left and right atria dilation, left ventricular hypertrophy, hypertension, aortic disease. Main perioperative predictive factors were: type of surgery, surgery with/without CPB, use of cardioplegia, CPB and aortic clamping time. Fisher's exact and Chi-square tests were used, the significance level was 0.05. The study was approved by Ethics Committee.

Results and Discussion: Between January and December 2014, 399 individuals were selected, 74.9% male, mean age 66.8 ($\pm$10.5) years. Aortic valve replacement surgery (AVRS) showed higher incidence of AF in all evaluation moments compared with coronary artery bypass grafting (CABG) (2.27%/0.00%, 28.79%/13.48%, 6.06%/1.50%, 11.43%/0.00%). AF was associated with age over 65 years (p=0.00), hypertension (p=0.02), left ventricular hypertrophy (p=0.00), chronic renal failure (p=0.01), aortic stenosis (p=0.00), AVRS and CABG (p=0.00), cardiopulmonary bypass (p=0.00) and use of cardioplegia (p=0.00).

Conclusion: The incidence of AF was higher in AVRS, and the evaluation moment with higher incidence was intensive care unit/hospitalization in both types of surgery. Preoperative predictive factors associated with AF were age, left ventricular hypertrophy, hypertension, aortic stenosis and chronic renal failure. Intraoperative predictive factors were surgery with CPB and the use of cardioplegia.

References

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