



Commentary on : New-Onset Atrial Fibrillation Predicts Long-Term Mortality After Coronary Artery Bypass Graft by El-chami et.al

Giovanni Filardo, PhD, MPH^{a,b,c,d}.

^aInstitute for Health Care Research and Improvement, Baylor Research Institute, Dallas, TX, ^bDepartment of Infectious Diseases, University of Louisville, Louisville, KY, ^cDepartment of Epidemiology, University of North Texas Health Science Center School of Public Health, Fort Worth, TX, ^dDepartment of Statistical Science, Southern Methodist University, Dallas, TX

Introduction

El-chami and colleagues¹ report that new-onset post-operative atrial fibrillation (AF) is associated with a significant reduction in long-term survival (adjusted hazard ratio: 1.21; 95% confidence interval: 1.12 to 1.32; follow-up: mean 6 years, range: 0 to 12.5 years) for patients undergoing isolated coronary artery bypass grafting (CABG). Moreover, the authors suggest that patients with new-onset post-CABG AF discharged on warfarin experienced reduced mortality during follow-up (adjusted HR: 0.78, 95% CI: 0.66 to 0.92) when compared to those who were not discharged on warfarin.

Early studies appear to indicate that new-onset post-operative AF is a transient event with little impact on short or long-term outcomes.²⁻⁴ However, more recent studies show atrial fibrillation, following CABG surgery, to be associated with both increased immediate complications and costs,⁵ as well as poorer long term outcomes.⁶⁻⁸ El-chami and colleagues¹ study provides further evidence regarding the detrimental effect of new-onset post-CABG AF on long-term survival, and more importantly, provides new data regarding the effectiveness of warfarin at discharge.

Current recommendations for management of post-cardiac surgery AF^{9,10} are based on the notion that post-operative new-onset AF is transient, of self-limited duration, and of minor impact on long term outcomes. Therefore, the current recommendations are not reflective of recent publications on this subject matter. The use of anticoagulant therapy, according to current recommendations, must be weighed against the potential risk of bleeding associated with recent major surgery,⁹ without regard to more current findings –findings, that implicate post-cardiac surgery new-onset AF, as a strong indicator of poorer long term outcomes. In this current context of uncertainty, El-chami and colleagues¹ data provide critical motivation for developing new strategies for post-operative management. Their data stress: 1) that new-onset post-CABG AF (independent of the patient's pre-operative risk profile) has a significant effect on survival; and 2) that among those patients who experience new-onset AF, those who were prescribed warfarin at discharge had improved survival. The positive findings regarding warfarin reported by El-chami et al.¹ might however, suffer from possible intervention bias / selection bias (e.g. perhaps warfarin was prescribed to those patients who had better post-operative risk profiles –the statistical analysis was adjusted for pre-

Corresponding Address : Giovanni Filardo, PhD, MPH, Institute for Health Care Research and Improvement, 8080 North Central Expressway, Suite 500, Dallas, TX 76206.

operative risk factors) and did not address continual use of warfarin during the follow-up period. However, these findings do emphasize the critical role played by in-hospital and post-discharge management of new-onset AF in improving long-term survival in CABG patients, and highlighted the critical need for further research in this field.

The increasing age and risk profile of the population undergoing CABG¹¹ will result in increased incidence of new-onset post-operative AF. Reducing the burden of this serious and common post-operative adverse outcome has become a public health priority. Research, such as El-chami and colleagues', that investigates the effectiveness of existent / new preventive and therapeutic strategies is critical for improving long-term outcomes for the over 125,000 people in the United States and more than 1.5 million people worldwide that undergo CABG¹² each year.

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