

contrary, such advances may have paradoxically contributed to an increase in the incidence of AF that has been seen in recent years. (Creswell, et al 1993).

Improvements in surgical techniques, myocardial protection and care of the critically ill patient in the operating room and the intensive care unit have resulted in a major rearrangement of the risk profile of CABG patients. Coupled with the rapid evolution of the technology and practice of percutaneous revascularization procedures, current surgical patients are significantly older and sicker than their counterparts were 10 or 15 years ago. Such patients are at a higher risk for an increased morbidity and mortality. (Jones., et al 1991).

Advances in continuous monitoring technology have led to more frequent diagnosis of AF, which remains the most common cause of morbidity after coronary surgery(Andrews.,et al 1991). Although the increased hospital LOS attributable to AF is modest compared with other more serious complications such as acute respiratory distress syndrome, septicemia, or pneumonia,(Mauldin.,et al 1994) the cumulative impact of AF that occurs with greater incidence on hospital resource utilization is far more significant. The results of this study confirm the high incidence of postoperative AF (21.66%) in patients undergoing CABG and identify its independent clinical predictors

In this study we demonstrated that, in a selected population of patients with isolated and elective CABG, LAV estimates based on 2-D echocardiographic measures were positively and independently associated with the occurrence of POAF.

POAF is a common complication of cardiac surgery, involving about 20% to 40% of patients treated by CABG (Mariscalco., et al 2009). In this particular context, POAF was associated with increased postoperative morbidities (Mathew.,et al 2004) and early (Mariscalco.,et al 2008) and late mortality.(El-Chami.,et al 2010) .

Data from the Framingham study suggest that LA enlargement is among the strongest predictors for subsequent development of AF.(Vaziri.,et al 1994) However, standard M-mode and 2-D LA measurements have many limitations in the detection of LA enlargement.(Appleton., et al 1993) LAV is a more reliable index of LA enlargement and has been shown

to predict AF occurrence in nonsurgical and unselected cardiac surgery populations.(Osranek .,et al 2006).

However, the clinical utility of adding LAV measurements to standard clinical examinations is not well defined. (Khankirawatana.,et al 2004). Thus, we prospectively evaluated the ability of LAV measurement to predict POAF in a selected population of patients undergoing isolated off pump CABG

To eliminate bias, we excluded patients with more than mild mitral and tricuspid regurgitation and patients with previous intervention on the mitral valve or the LA. Our study confirmed that increased LAV is significantly associated with POAF occurrence, and is a better predictor than M-mode and 2-D LA dimensions. In a previous study, Osranek et al. reported a strong and independent association of LAV and POAF, with a 5-fold increase in patients with LAV >32 ml/m². Moreover, the authors proposed preoperative risk stratification using LAV >32 ml/m² and age >65 years to identify high-risk patients before cardiac surgery. We demonstrated that increased LAV was the strongest independent risk factor among other echocardiographic indexes.

To avoid a selection bias, we decided to include in the study all the patients with stable sinus rhythm before CABG. Nevertheless, we performed analysis excluding the patients with a history of preoperative paroxysmal AF.

Our study shows a significant association between POAF and post operative blood transfusion. Increased LAV seems to be an accurate indicator of the burden of cardiovascular disease,(Tsang TS.,et al 2001) and the remodeled cardiovascular system can be expected to be more susceptible to increased adrenergic stress and dynamic volume changes associated with surgery and related complications such as bleeding. The observation that POAF results from the interplay of predisposing factor (enlarged left atrium) and triggering events (like post operative bleeding and consequent catecholamine release) could explain the differences in prognostic values of LAV enlargement reported by this study and others.

In previous study, patients treated by statins before