Summary

Atrial fibrillation is one of the most common complications occurring after cardiac surgery, with as many as 10% to 40% of all patients undergoing CABG experiencing new onset post-operative AF with the arrhythmia usually occurring between second and fourth postoperative days**,** With a peak incidence on postoperative day 2, Seventy percent of patients develop this arrhythmia before the end of post-operative day 4

The aim of this work was to evaluate the atrioelectromechanical interval (AEMI) and its role in prediction of post-CABG AF. In addition to the search for other significant predictors that could be used in predicting post-CABG AF

The present study included 30 patients who underwent isolated CABG in Cairo university hospitals.

Full history & clinical examination of all the patients were done preoperatively.

Furthermore preoperative ECG analyses of p wave duration and dispersion, coronary angiography, echo and TDI with the calculation of AEMI were done.

Post operative data included post operative echo and occurrence of post operative AF or not.

As a result, the patients were classified into two groups, group I with documented post-CABG AF and group II with no AF. P wave

duration and dispersion were found to be statistically significant in predicting post-CABG AF (p value=0.022 & 0.04 respectively)

RCA disease (p value=0.002) and decrease serum magnesium postoperatively (p value=0.004) were also found to be statistically significant and can predict post CABG-AF.

The mean value of AEMI in group I patients was significantly longer; 136± 5.6 versus 93.7± 19 msec in group II patients (P=0.001).Using ROC analysis, it was found that the cut off value of the AEMI as a predictor of post-CABG AF was 120msec which achieves 100% sensitivity & 99% specificity.