**LEFT ATRIAL DISSYNCHRONY AS A PREDICTOR OF POSTOPERATIVE ATRIAL FIBRILLATION IN CANCER PATIENTS**

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*Background*: Based on previous reports in patients with heart failure, we hypothesized left atrial dyssynchrony (LAD) can predict new-onset postoperative atrial fibrillation (POAF) after lung lobectomy.

*Methods*: We analyzed the charts of 853 patients without history of AF who underwent lung lobectomy for primary lung cancer, sarcomas or metastasis. Among them, 151 patients (18%) developed POAF, but only 33 patients (71±1.6 years) had quality transthoracic echocardiograms (TTE) in the 3-month period prior to surgery (POAF group). Forty patients (66±1.8 years) who underwent lobectomy, had quality TTEs prior to surgery and did not develop POAF, were chosen as control group. There was no significant difference between POAF and control groups in respect to age, cardiovascular risk factors, LA size, left ventricular systolic and diastolic function. Baseline LAD was assessed with vector velocity imaging (VVI) technology by measuring time-to-peak longitudinal strain and maximum opposing wall delays (MOWD) in the mid-portion of LA walls (septal, lateral) at peak atrial contraction in standard four-chamber views of TTEs prior to surgery.

*Results*: Patients in POAF group had significantly more LAD prior to surgery compared to patients in control group (MOWD 58±34 msec vs 39±24 msec, p=0.009, respectively). Using Receiver-Operating Characteristics curve analysis, we identified a MOWD cut-off value of 66 msec which can predict new onset POAF after lobectomy with 51% sensitivity and 83% specificity (area under the curve 0.68).

*Conclusions*: LAD assessment by VVI can be helpful in predicting new-onset POAF after lobectomy, thus identifying patients who might benefit from prophylactic antiarrhythmics perioperatively.