

follow-up 14.7 months was similar in both groups with 1 stroke in the peridevice leak group and 2 in the other group (5.5% and 8% respectively).

Conclusions Cardiac CT scan is an accurate technique for peridevice leaks detection. Important oversizing of the device is not associated with absence of residual leaks. There is a trend toward more residual leaks in the biggest LAAs. No adverse outcome were related with a residual leak.

The author hereby declares no conflict of interest

0327

Echocardiography improves the risk prediction of peri-operative outcomes in patients undergoing coronary bypass surgery? A prospective study

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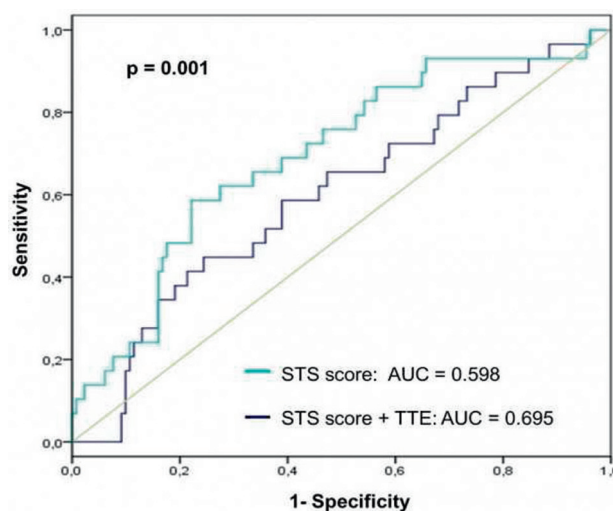
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Objective To assess the performance of transthoracic echocardiographic (TTE) parameters to predict operative mortality and morbidity in patients undergoing coronary artery bypass grafting (CABG) and to compare their prognostic value to that obtained by the Society of Thoracic Surgeon (STS) score.

Materials and Methods We prospectively collected the clinical and biological data required to calculate the STS score in patients hospitalized for CABG. A preoperative TTE was performed for each patient. Primary end-point was 30-days mortality or major morbidity (i.e. stroke, renal failure, prolonged ventilation, deep sternal wound infection, reoperation) as defined by the STS. Secondary end-point was prolonged hospitalization >14 days.

Results 172 patients were included (mean age 66.1±10.2 years, 12.2% were women). The primary end-point occurred in 33 patients (19.2%) and 28 patients (16.3%) had a prolonged hospital stay. Independent predictive factors for the primary end-point were an increased left atrial volume (>31mL/m²) (OR=3.186, IC 95%=1.266; 8.015, p=0.014) and a decreased tricuspid annular plane systolic excursion (TAPSE <20mm) (OR=2.709, IC 95% 1.144; 6.410, p=0.023). The addition of these two parameters to the STS score improved significantly the model performance (figure) with a better risk prediction (Integrated Discrimination Improvement=7.44).

Conclusion In patients undergoing CABG, preoperative TTE is mandatory as it provides an additional prognostic value to the STS score.



The author hereby declares no conflict of interest

0401

Left ventricular mechanics: novel tools to evaluate function and dyssynchrony in controls and cardiac resynchronization therapy candidates

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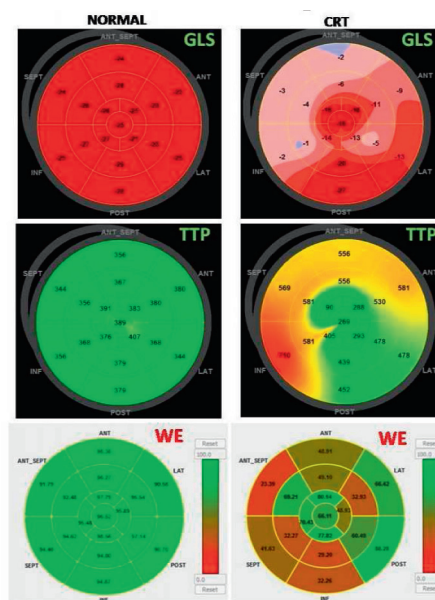
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Background Left ventricular (LV) pressure-strain loops (PSLs) have been recently validated as a non-invasive index of myocardial performance. Aim of the present study is to compare average cardiac work (avgCW), positive work (avgPW), negative work (avgNW) and work efficiency (WE) in normal subjects (NOR) and in cardiac resynchronization therapy candidates (CRT).

Methods we included in this study 20 NOR and 61 CRT patients (mean LVEF, GLS and QRS duration: 64±5 vs 27±5%, -23±2 vs -8±3%, 71±21 vs 170±17 msec; respectively, all p<0.0001). Strain traces and valvular event times were used for the calculation of LV-PSLs.

Results with respect to NOR, CRT patients showed an increase in avgNW (329±139 vs 174±67mmHg%, p<0.0001), a significant decrease in avgCW (640±371 vs 2130±206mmHg%, p<0.0001), avgPW (994±378 vs 2338±204mmHg%, p<0.0001), and WE (74±10 vs 93±3, p<0.0001). The attached figure is displaying a typical example of a NOR and of a CRT patient. In CRT, the reduction in GLS (upper panel) is associated with a lengthening of time-to-peak GLS (TTP), particularly in the interventricular septum (IVS) (middle panel). The WE is globally reduced in CRT, but this reduction is greater in the IVS (lower panel).

Conclusions regional LV-PSLs allow the assessment of global and regional myocardial performance. Their relationship with LV dyssynchrony provides a window for a best understanding of LV mechanics and it will help in defining the most specific parameter for predicting the non-response to CRT.



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