

Oral presentation

Long-term prognostic value of dobutamine cardiovascular magnetic resonance in 1466 patients and its value for clinical decision making

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Introduction

Current available reports about the prognostic value of dobutamine stress cardiovascular magnetic resonance (DCMR) are limited by the number of patients and cardiac events.

Purpose

Aim of this study was to assess the long-term value of DCMR for prediction of late cardiac events in a large cohort of patients with known or suspected coronary artery disease.

Methods

Clinical data and DCMR results were analyzed in 1466 consecutive patients undergoing DCMR between 2000 and 2004. Ninety four patients lost to follow-up and three hundred fifty five patients who underwent early revascularization within 3 months of DCMR were excluded from analysis. The remaining 1017 patients (median age, 62 years) were followed up for a mean of 44 ± 24 months (range: 1 to 116 months). Wall motion abnormalities (WMA) at rest and the presence of stress-induced WMA (ischemia) were assessed for each patient. Cardiac events, defined as cardiac death and non-fatal myocardial infarction, were related to clinical and DCMR results. Patients with inducible WMA were compared in regards to follow-

ing therapy (revascularization or medical therapy alone) and outcome.

Results

Twenty nine percent of the patients experienced an inducible WMA during testing. Forty six cardiac events were reported, documented cardiac death in 33 and nonfatal myocardial infarction in 13 patients. In those with and without inducible WMA, the proportion of patients with cardiac events were 8.0% versus 3.1%, respectively, (hazard ratio: 3.3; 95% confidence interval: 1.8 to 5.9 for the presence of inducible WMA; $p < 0.001$). A normal DCMR carried a relatively good prognosis, with a 5-year event-free survival of 97.1%.

Patients who underwent revascularization within 3 months of DCMR due to inducible WMA demonstrated a significant lower rate of cardiac events (5.1%) compared to patients with inducible WMA and medical therapy only (8.0%), $p < 0.001$.

Conclusion

In a large cohort of patients, DCMR has an added value for predicting cardiac events during long-term follow-up, improving the differentiation between high-risk and low-risk patients. Patients with inducible WMA and following

early revascularization, demonstrate lower cardiac event rates than patients with medical therapy alone.

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