

Oral presentation

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Prognostic value of dobutamine cardiovascular magnetic resonance in patients with peripheral arterial disease

Juliane Vierecke¹, Sebastian Kelle*¹, Amedeo Chiribiri², Christoph Klein¹, Christina Egnell¹, Cosima Jahnke¹, Rolf Gebker¹, Ernst Wellnhofer¹ and Eckart Fleck¹

Address: ¹German Heart Institute Berlin, Berlin, Germany and ²King's College, London, UK

* Corresponding author

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Introduction

Patients with peripheral arterial disease are at high risk of cardiovascular events.

Purpose

Aim of this study was to assess the value of dobutamine stress cardiovascular magnetic resonance (DCMR) for prediction of cardiac events in patients with peripheral arterial disease.

Methods

Clinical data and DCMR results were analyzed in patients with peripheral arterial disease undergoing DCMR between 2000 and 2004. Peripheral arterial disease was defined as significant stenosis or occlusion of peripheral arteries of the lower and upper extremity or of the carotid artery. After an average of 35 ± 17 months, 140 patients (median age, 65 years) were contacted and medical records were reviewed. 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 assessed.

Results

Fifty two patients (37.1%) experienced an inducible WMA during testing. Fifteen cardiac events were reported, cardiac death in 13 and non-fatal myocardial infarction in 2 patients. In those with and without inducible WMA, the

proportion of patients with cardiac events were 17.3% versus 6.8%, respectively, (hazard ratio: 3.8; 95% confidence interval: 1.3 to 11.1 for the presence of inducible WMA; $p = 0.015$). Patients without inducible WMA demonstrated a relatively good prognosis, with a 48-months event-free survival of 95.5%.

Conclusion

Patients with peripheral arterial disease have an increased risk of cardiovascular events. In patients with generalized arteriosclerosis, DCMR has an added value for predicting cardiac events during long-term follow-up.