



# 74. Jahrestagung

Annual meeting

27. bis 29. März 2008

Congress Center Rosengarten Mannheim



Deutsche Gesellschaft  
für Kardiologie

– Herz- und Kreislaufforschung e.V.  
German Cardiac Society

## Postervorträge - Vorhofflimmerablation

P1509 - Increased NT-pro-B-type natriuretic peptide independently predicts outcome following catheter ablation of atrial fibrillation using cryoballoon technology

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**Introduction:** Catheter ablation is a potential curative treatment of patients with atrial fibrillation (AF). However, recurrence of AF is commonly seen after ablation in a certain percentage of patients. The cardiac natriuretic peptides, ANP, BNP and their molecular precursors, are secreted from the cardiac myocytes in response to increased haemodynamical stress, to restore and maintain cardiovascular homeostasis. This study aimed to investigate whether measurement of plasma NT-pro-B-type natriuretic peptide (NT-proBNP) before ablation has predictive information regarding the clinical outcome following pulmonary vein isolation (PVI) using cryo balloon catheters in patients with symptomatic paroxysmal atrial fibrillation.

**Methods:** The study population consisted of patients who underwent catheter ablation for symptomatic AF. PVI was performed with the cryo balloon technique (ArcticFront™CryoCath). Plasma samples for NT-proBNP analysis were obtained directly prior the ablation and repeated every three months at clinical visit. Patients were asked for clinical recurrences, additionally 7 day holter ECG or Event Recordings were performed at each follow up. Documented recurrence of AF longer than 30sec was defined as endpoint.

**Results:** A total of 78 patients were included (47 male, median age 57 years (IQR 49-64)), paroxysmal AF in 71 patients. Before ablation the median estimated AF burden was 180 h (IQR 60-436). At baseline, the median NT-proBNP concentration was 176 pg/ml (IQR 94-374) (normal range 1.0-88.0). Short axis of the left atrium in median was 38mm (IQR 36-41), long axis 53mm (IQR 58-65), LVEF in median 60% (IQR 58-65%). During a median follow up of 8.9 months (IQR 6-12.2), 49 patients were free of AF while 29 patients experienced recurrent AF. In patients with successful ablation, the median NT-pro-BNP concentration at baseline was 147 pg/ml (IQR 90-241) compared to 202 pg/ml (IQR 96-561) in patients with ablation failure ( $p < 0.01$ ). A baseline NT-pro-BNP concentration  $> 350$  pg/ml was found to be independent predictor of ablation failure ( $p < 0.01$ ). Out of 22 patients with a baseline NT-pro-BNP concentration  $> 350$  pg/ml 18 experienced recurrent AF (positive predictive for ablation failure 81.8%).

**Conclusions:** A significantly lower NT-pro-BNP concentration at baseline was seen in patients successfully ablated for atrial fibrillation compared to patients with recurrent atrial fibrillation after successful PVI. A baseline NT-pro-BNP concentration  $> 350$  pg/ml independently predicts ablation failure.