PROGNOSTIC IMPACT OF EARLY GADOLINIUM ENHANCEMENT IN PATIENTS WITH ACUTE NON ISCHEMIC CARDIOMYOPATHIES

Poster Contributions
Poster Sessions, Expo North
Saturday, March 09, 2013, 10:00 a.m.-10:45 a.m.

Session Title: Imaging: MRI I Prognostic Value of CMR
Abstract Category: 19. Imaging: MRI
Presentation Number: 1137-320

Authors: Francesca Sanguineti, Melina Mana, Philippe Garot, Thomas Hovasse, Yves Louvard, Thierry Unterseeh, Marie-Claude Morice, Jérome Garot, Institut Cardiovasculaire Paris Sud, Massy, France

Background: Early Gadolinium Enhancement (EGE) can be used to assess acute myocardial inflammation, but its prognostic impact is not established in patients with ANIC. The aim of the study was to evaluate if the presence, extension and distribution of EGE at the acute phase of ANIC may predict long term functional and clinical outcome.

Methods: We studied consecutive pts diagnosed with ANIC by CMR between 2008 and 2011. Initial clinical assessment and CMR was performed at mean 11±12 days after acute clinical presentation. For the assessment of EGE, contrast-enhanced CMR was performed 3 min after gadolinium chelates. For analysis, the myocardium was divided into 17 segments and each of them in 3 myocardial sectors (subepicardium, midwall, subendocardium). The extent of EGE was expressed as the number of myocardial segments involved and percent LV myocardial area. The distribution of EGE in opposed wall and wall location were also assessed. The primary endpoint was the occurrence of adverse cardiac events including recurrence of symptoms, congestive heart failure, ventricular arrhythmias, heart transplantation or death, at clinical follow-up (FU) performed 19±8 months after index CMR. The secondary endpoint was the evaluation of the left ventricular ejection fraction (LVEF) on the last echocardiographic or CMR study.

Results: Patient population comprised 203 pts (43±17 year-old, 76% males) with ANIC. Adverse cardiac events occurred in 10.8% of the whole population (22/203 patients). EGE was present in 114 pts (56%). Compared to patients without clinical events at FU, the extent of EGE was less in pts with adverse outcome (2.2±4.1 vs. 5.1±6.0% of LV myocardial area, p=0.005; 1.0±1.7 vs. 1.9±1.9 myocardial segments, p=0.04). By univariate analysis, the presence of EGE was inversely correlated with clinical events at FU (p=0.04). The presence and extent of EGE were not independent predictors of adverse clinical outcome on multivariate analysis.

Conclusions: In patients with ANIC, a significant and inverse relationship was found between the presence and extent of EGE and the occurrence of adverse clinical events. The presence and extent of EGE were not independent predictors of outcome.