



## Heart Failure

### ANALYSIS OF PROGNOSTIC VALUE OF PERFORIN IN ENDOMYOCARDIAL BIOPSIES OF PATIENTS WITH DILATED INFLAMMATORY CARDIOMYOPATHY

Poster Contributions

Poster Sessions, Expo North

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**Background:** Intramyocardial inflammation is known to have an adverse prognostic impact in DCMi. However, the precise role of contributing pathogenic factors for a prediction the long-term course yet remains elusive. The aim of this study was to analyse the prognostic value of cytotoxic T-lymphocytes (CTLs: Perforin) in a large cohort of patients with dilated inflammatory cardiomyopathy (DCMi).

**Methods and Results:** We studied n=495 consecutive patients with virus negative DCMi, undergoing endomyocardial biopsies (EMBs). We examined haemodynamic measurements after a mean follow-up period of 3035 months. In EMBs myocardial inflammation was assessed by histology and immunohistology. At follow-up n=388 patients showed a stable normal or significant improvement of left ventricular ejection fraction (LVEF) from 46.2±14.8% to 64.3±12.3% (P<0.0001). No recovery of LVEF was observed in n=61 patients (development from 30.4±10.5% to 27.4±11.8%), and significant deterioration from mild to severe LV dysfunction was observed in n=46 patients (from 53.1±18.28% to 38.3±17.18%, P<0.0001). The latter was associated with a significant increase in perforin+ infiltrates in EMBs (6.3±3.9 perforin+ cells /mm<sup>2</sup> versus 0.8±1.0 perforin+ cells /mm<sup>2</sup> in patients who recovered, P<0.0001). In a subgroup analysis of 104 patients with re-biopsy (mean 8.3±7.8 months), LV function decreased in patients with persistence of perforin+ infiltrates (LVEF from 54.3±16.1% to 39.2±16.1%) in 74.1% of these.

**Conclusions:** In this biopsy-based analysis of the long term course of DCMi, we showed an association between presence of perforin+ phenotypes detected in the myocardium of patients and prediction of failure for improvement of LV function in DCMi patients.