**1015-139**

**Cyclosporine A Treatment Decreases Left Ventricular Mass in Mice Expressing a FHC-Linked Troponin T (179N) Mutation**

Bjoern C. Krogmann, Syeda G. Sirenko, James D. Potter, Kenneth Horton, Nal J. Weissman. Georgetown University School of Medicine, Washington, Dist. of Columbia, Washington Hospital Center, Washington, Dist. of Columbia, Cleveland Clinic Lerner College of Medicine, Cleveland, Ohio.

Cyclosporine A (CyA) prevents cardiac hypertrophy in several animal models, and has been proposed as treatment for Familial Hypertrophic Cardiomyopathy (FHC). But with the recent report that CyA administration increased cardiac hypertrophy and mortality in a mouse model of FHC (mMHCv403), proposed clinical studies with CyA were abandoned. Because the CyA effect could be specific to this particular mouse model, we examined the effect of CyA in a different murine FHC model expressing a troponin T (179N) mutation. **Methods:** Mice expressing human wild-type (Tg-WT), mutant (Tg-179N) Troponin T and non-transgenic littermates (Non-Tg) were treated with CyA (18mg/kg/day) for 4 weeks. LV dimensions, mass and function were measured with serial echocardiography in blinded fashion. **Results:** All mice tolerated CyA treatment. LV wall thickness and mass significantly decreased in CyA-treated Tg-179N mice compared to all other groups (table). Systolic function was unchanged. On sacrifice, heart to body weight ratio was significantly decreased in CyA-treated compared to vehicle-treated Tg-179N mice. **Conclusions:** CyA treatment should not be generalized across different FHC-linked mutation models. **Effect of CyA treatment on LV mass (means+sd)**

<table>
<thead>
<tr>
<th>Genotype</th>
<th>n</th>
<th>Treatment</th>
<th>Baseline (mg)</th>
<th>4 weeks (mg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tg-179N</td>
<td>7</td>
<td>CyA</td>
<td>64±3</td>
<td>72±4**</td>
</tr>
<tr>
<td>Tg-179N</td>
<td>7</td>
<td>Vehicle</td>
<td>65±6</td>
<td>118±4</td>
</tr>
<tr>
<td>Tg-WT</td>
<td>6</td>
<td>CyA</td>
<td>100±3</td>
<td>112±5</td>
</tr>
<tr>
<td>Non-Tg</td>
<td>6</td>
<td>CyA</td>
<td>87±3</td>
<td>111±5</td>
</tr>
</tbody>
</table>

**Conclusion:** Although CyA treatment decreases LV mass in Tg-179N mice, it is not associated with a deleterious effect on cardiac function.
1015-160 Quantification of Myocardial Injury After Percutaneous Transluminal Septal Myocardial Ablation in Hypertrophic Obstructive Cardiomyopathy

William G. van Dokkum, Folkert J. ten Cate, Junten M. ten Berg, Aernout M. Beek, Albert C. van Rossum, VU University Medical Center, Amsterdam, The Netherlands.

Background: Percutaneous transluminal septal myocardial ablation (PTSMA) is a non-surgical therapeutic procedure for reducing left ventricular outflow tract obstruction in symptomatic patients with hypertrophic obstructive cardiomyopathy (HOCM). The aim of this study was to evaluate septal myocardial injury size after PTSMA using delayed contrast-enhanced (DCE) magnetic resonance imaging (MRI) and histology.

Methods: 12 patients (mean age 52±15 years, 7 males) underwent MRI before and after PTSMA. In all patients the injured myocardium was well visualized. The hyperenhanced septal myocardial mass was in the range of 3.6 to 34.9 g [mean: 12.8 ± 7.8 g] and involved 5.0 ± 4.0% of the ablation-related total LV mass vs. 2.1±2.1% of the septal myocardial mass. Hypertrophic myocardial size was not correlated with the volume of ethanol administered.

Conclusions: The extent of myocardial injury after PTSMA can be determined using DCE-MRI and was not correlated with the volume of ethanol administered. The method may serve as control and feedback for the interventional procedure.

1015-161 Untoward Effect of Septal Reduction Interventions on Conduction System in Patients With Obstructive Hypertrophic Cardiomyopathy


Hypertrophic obstructive cardiomyopathy (HOCM) patients may develop conduction abnormalities after percutaneous transluminal septal myocardial ablation (PTSMA) and myectomy (MYE) procedures. The aim of the study was to observe the impact of both procedures on the conduction system.

Methods: 52 patients were included in this study. Patients were divided into equal groups in patients who received PTSMA and MYE. The methods of diagnosis were standard 12 leads ECGs and echocardiography, the presence of nonsustained ventricular tachycardia (VT: more than 5 consecutive ventricular ectopic beats) and the extent of myocardial fibrosis, the speckle tracking and tissue Doppler imaging (TDI) of presence of nonsustained VT (p≤0.05) were independently associated with sudden death. Kaplan-Meier analysis revealed that patients with a greater extent of IC fibrosis (>12.5%) and nonsustained VT (Group I) showed significantly higher rate of cardiac death than those with a lesser extent of IC fibrosis or the absence of nonsustained VT (Group II) (67% vs 9%, p<0.001).

Conclusion: The extent of IC fibrosis and the presence of nonsustained VT would be a predictive marker of sudden death in PTSMA patients receiving ACEI and BB.

132A ABSTRACTS - Cardiac Function and Heart Failure

1016-162 QT Dispersion Is Not Associated With Left Ventricular Function in Elderly Patients With Symptomatic Heart Failure: ELITE II Substudy

Y. Kato, Takaya Ono, Yutaka Takahashi, Kiyotaka Hashimoto, A. John Guarino, Bertram Pitt, Philip A. Polos-Wilson, Frederic Sax, Kathryn Bohannon, Marat Mak, for ELITE II investigators, St. George's Hospital Medical School, London, United Kingdom, Merck Research Labs, West Point, Pennsylvania.

Background II remains controversial if QT dispersion (QTd) is associated with left ventricular function or aetiology in patients (pts) with heart failure (HF). Methods To examine the association between QTd and left ventricular function and the prognostic value of QTd in HF secondary either to ischaemic dilated cardiomyopathy (ICD) or ischaemic heart disease (HID), we studied 966 HID pts (age 71±7 years, 703 men) enrolled into the ELITE II trial. Of study pts, 766 had IHD (age 71±7 years, 573 men) and 190 had IDC (age 71±7 years, 66 men). QT intervals were manually measured on standard 12-lead ECGs using an in-house computer assisted system. Results In all study pts, the mean QTd and JTD were 86±31 and 82±32 ms, respectively. In pts with LVEF<50%, heart rate was significantly higher (P<0.001) and QT was significantly shorter (256±19 vs 46±31 ms). No significant difference in QTd was found between pts with and without NYHA class III-IV (87±31 vs 84±32 ms). QTd was not correlated with LVEF or NYHA class III-IV. In both IHD and IDC, a QTd >60 ms did not predict cardiac death or sudden death. Conclusion: The extent of IC fibrosis and the presence of nonsustained VT would be a predictive marker for sudden death in DCM patients receiving ACEI and BB.

1016-163 QT Dispersion is Associated With Myocardial Fibrosis in Patients With Dilated Cardiomyopathy Receiving Angiotensin Converting Enzyme Inhibitors and Beta-Blockers: The Extent of Interstitial Myocardial Fibrosis and the Presence of Nonsustained Ventricular Tachycardia

Takahisa Yamada, Masatoki Fukunari, Tatsuyoshi Shimomogna, Kazuaki Kumagai, Akio Hira, Mitsuohi Asai, Nobuyuki Maki, Hitotake Kikka, Noritake Hori, Osako Pre-lacteral General Hospital, Osaka, Japan.

Background: Recent clinical trials have shown that angiotensin-converting enzyme inhibitors (ACEI) and beta-blockers (BB) reduce the mortality in patients with dilated cardiomyopathy (DCM). However, some DCM patients still died suddenly in spite of the administration of ACEI and BB. We tried to identify patients at risk for sudden death in DCM patients receiving ACEI and BB. Methods: We studied 50 DCM patients (NYHA class: 2+0+6, left ventricular ejection fraction: 32±3%) receiving ACEI (78%) and BB (76%). At the baseline, we performed echocardiography, 24 hour ECG monitoring, right side cardiac catheterization, left ventricular endomyocardial biopsy. The extent of myocardial fibrosis was estimated by the point count method in all biopsy samples. Moreover, after classifying myocardial fibrosis successively into two types, interlaminar (IC) and interfascicular fibrosis, by the distribution of fibrosis on each cross point, we also estimated the extent of each fibrosis.

Results: During the observation period of 58±28 months, 8 patients died suddenly. By multivariate Cox analysis, other than the variables including clinical, hemodyanamic, echocardio- graphic parameters, the presence of nonsustained ventricular tachycardia (VT: more than 5 consecutive ventricular ectopic beats) and the extent of myocardial fibrosis, the speckle tracking and tissue Doppler imaging (TDI) index were independently associated with cardiac death. Kaplan-Meier analysis revealed that patients with a greater extent of IC fibrosis (>12.5%) and nonsustained VT (Group I) showed significantly higher rate of cardiac death than those with a lesser extent of IC fibrosis or the absence of nonsustained VT (Group II) (67% vs 9%, p<0.001).

Conclusion: The extent of IC fibrosis and the presence of nonsustained VT would be a predictive marker for sudden death in DCM patients receiving ACEI and BB.