The Effect of Continuous-flow Ventricles Assist Device and Support Time on Pulmonary Artery Pressure in Bridge to Heart Transplant Patients

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Introduction: The new generation continuous-flow left ventricle assist devices (LVAD) is an option for heart transplantation for end-stage heart failure. These kind of devices which developed with new technology, are implanted widely all over the world for bridge to transplantation as well as destination therapy. The effect of LVAD therapy on pulmonary artery pressure (PAP) in patients with fixed pulmonary artery hypertension (PAH) who are not good candidate for heart transplant, is an important research topic. In this study, we evaluated the course of PAP in LVAD therapy and its effect to post-transplant results.

Materials-Method: Between December 2008 and June 2013, continuous-flow LVAD implantation were performed in 75 patients. Mean age was 48.39 years and 87% was male. The common etiology for heart failure was Idiopathic dilated cardiomyopathy (69%). 9 of 73 patients (12.3%) were successfully bridged to transplantation. 8 patients with fixed PAH were included in this study. PAP levels were retrospectively compared before LVAD, after LVAD and after heart transplantation.

Results: Mean PAP before LVAD, after LVAD therapy and after heart transplant was respectively 59.6 mmHg, 34.8 mmHg and 32.8 mmHg. The reduction of PAP was evident in patients supported with LVAD more than 60 days and consequently complications related to PAH were lower in this group. Two patients were died in early period of after heart transplant, the common feature of them was short support time. Mean support time was 34 days. PAP was still high after LVAD and the main cause of mortality was right heart failure related multi-organ failure.

Conclusion: The study is limited due to low-number of patients. But the decline of fixed PAH even it is refractory to vasoconstrictor therapy was found in our analysis. As a conclusion we think that LVAD therapy before heart transplantation, in patients with decompensated heart failure and severe PAH, improves the results of heart transplantation.

PP-065
The Correlation between miRNA (miR: microribonucleic acid) Levels and Clinical Endpoints in Heart Failure

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Aim: The relationship of miRNA levels in patients admitted to the hospital because of acute decompensated heart failure (ADHF) as cause of heart failure, in hospital and short-term cardiovascular events, hospital readmission and mortality.

Methods: Our study included 47 patients with decompensated HF (10 ischemic and 37 ischemic origin) and 30 healthy subjects (mean age: 57.13±8.32, 54.6±6 men). Peripheral blood was withdrawn and kept under appropriate circumstances to evaluate miR-22, miR-24 and miR-92b levels. When sample collection was completed, the levels of miRNA detected from peripheral blood cells (leukocytes) were calculated using the method PCR. The fold differences between groups were calculated as average and miRNA ΔCt at the moment of normalized miRNA in a cycle) values were used for comparison.

Results: %63.8 of the patients were male and mean age was 61.70±11.75. 39 patient had left ventricular systolic dysfunction and the average LVEF was %26.66±7.19. All patients’, in-hospital mortality was %6.3, 1-month mortality rate was %4.5 and in this duration hospital readmission rate was %63.18. There was a significant fold change (>2 fold) between the patients miR-22, miR-24 and miR-92b levels and the control group. However, the significant changes in miRNA, both in low and preserved left ventricular systolic function or in terms of etiology of HF showed no difference. Similarly, there was no correlation between the ΔCt values in terms of in-hospital and short-term cardiovascular endpoints.

Conclusion: Although there was a significant fold change in miRNA levels in patients hospitalized for ADHF, it did not correlate with the clinical endpoints analysed with ΔCt values.

Table 1. Some characteristics of HF patients

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<tr>
<th></th>
<th>Age (mean)</th>
<th>Gender (m/f)</th>
<th>BMI</th>
<th>HT</th>
<th>HLP</th>
<th>DM</th>
<th>LVEF (all HF group's average)</th>
<th>SVEF (LVD group)</th>
<th>PEF-RY (n)</th>
<th>DEF-RY (n)</th>
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</thead>
<tbody>
<tr>
<td>miR-22</td>
<td>-2.39 f</td>
<td>30 / 17</td>
<td>28.07</td>
<td>21 (%64.7)</td>
<td>35 (%74.5)</td>
<td>29 (%61.7)</td>
<td>%30.40±10.4</td>
<td>%26.66±7.19</td>
<td>8 (%17)</td>
<td>39 (%83)</td>
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<tr>
<td>miR-24</td>
<td>-2.07 f</td>
<td>-1.23 f</td>
<td>-1.59 f</td>
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<td>miR-92b</td>
<td>+2.33 f</td>
<td>3.0 f</td>
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<td>miRNA (miR; microribonucleic acid)</td>
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PP-066
The Relationship between Heart Failure Stage/Symptom Class and Anxiety

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Background: Anxiety disorders are most common encountered psychiatric disorders. There is no data regarding the relationship between this widely seen situation and heart failure stage/symptom class.

Aim: The aim of this study is to evaluate the relationship between various stages of anxiety disorders and heart failure stage/symptom classes.

Methods: A total of consecutive 419 patients with a mean age of 57.9±14.4 years (age range, 18-96 years) admitted with the symptoms of heart failure and/or with risk factors for heart failure were included in the study. Beck’s anxiety inventory including anxiety disorders and heart failure stages/symptom classes.

Results: Two hundred and nineteen patients (52.3%) were male, 247 (58.9%) had hypertension, 139 (33.2%) had diabetes, and 248 cases (59.2%) had coronary heart disease. Stage A heart failure was present in 113 patients (27.0%), stage B in 119 patients (28.4%), stage C in 116 patients (27.7%), and stage D in remaining 71 cases (16.9%). With regard to NYHA classification, 228 patients (54.4%) had class I symptoms, 101 (24.1%) had class II symptoms, 31 (7.4%) had class III symptoms, and class IV symptoms were found in remaining 59 patients (14.1%). The mean left ventricular ejection fraction of all population was 54.2 ± 12.4 and the mean Beck’s anxiety score was 13.4±19.0. Neither heart failure stages nor symptom classes were found to be statistically significant among 4 study groups regarding anxiety scores and severity (all p>0.05) (table).

Conclusion: There was no association between heart failure stage/class and anxiety score/severity in a wide population of heart failure patients.