ACC.14
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A887
JACC April 1, 2014
Volume 63, Issue 12

Heart Failure and Cardiomyopathies

CARDIAC TRANSPLANTATION IN IMMUNOGLOBULIN LIGHT CHAIN AMYLOIDOSIS: A LARGE SINGLE CENTER EXPERIENCE

Poster Contributions
Hall C
Sunday, March 30, 2014, 3:45 p.m.-4:30 p.m.

Session Title: Approaches to Advanced Heart Failure: From VAD, Transplant, Palliative Care to New Perctutaneous Therapies
Abstract Category: 12. Heart Failure and Cardiomyopathies: Clinical
Presentation Number: 1221-174

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Background: Immunoglobulin light chain (AL) amyloidosis is a plasma cell dyscrasia characterized by deposition of light chain amyloid fibrils in body tissues. Cardiac involvement occurs in most patients with AL amyloidosis, with severe involvement portending a poor prognosis. Cardiac transplantation has been controversial because of concern regarding disease progression and recurrence in the transplanted heart. Here we present the largest single center experience of cardiac transplantation for AL amyloidosis.

Methods: Between 1992 and 2011, 22 patients underwent orthotopic cardiac transplant to treat AL cardiac amyloidosis at our center. All patients met at least one of the following criteria: NYHA class IV heart failure, ventricular thickness > 15 mm, ejection fraction < 40%. Patients also met transplant selection criteria, including age < 60 years, < 10% plasma cells in bone marrow, low labeling index, and absence of nephrotic range proteinuria. Baseline characteristics, markers of disease severity, subsequent stem cell transplant or chemotherapy and immunosuppression regimens, and outcomes were recorded through systematic chart review.

Results: Of 22 patients who underwent cardiac transplantation, 15 were transplanted from 1992 to 2002 and seven from 2003 to present. Eight of 22 patients had isolated cardiac involvement at the time of transplant. 13 of 22 patients had biopsy proven gastrointestinal involvement, two had liver vasculature involvement, one had lung involvement, and one had renal involvement. Median wait time from listing to transplantation was 33 days (range 5 - 1,161). Median survival was 3.47 years following transplant. One, two, and five-year survival was 81.8%, 72.7%, and 47.6% respectively. 13 of these patients also underwent autologous stem cell transplants. There was no significant difference between survival of patients who had stem cell transplants and those who did not. Two patients underwent subsequent renal transplant and, in both, survival surpassed the cohort median.

Conclusions: Cardiac transplant is an important therapeutic option for AL amyloidosis patients with limited extra-cardiac involvement in whom systemic disease control can be achieved.