1097 Cardiac Transplantation: Predictors of Outcome I

Tuesday, March 31, 1998, 9:00 a.m.–11:00 a.m.
Georgia World Congress Center, West Exhibit Hall Level
Presentation Hour: 10:00 a.m.–11:00 a.m.

1097-53 Heart Transplant Centers Practice Patterns Affect Outcomes

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Background: Cardiac transplant centers determine the treatment and transplant waiting status of individual heart transplant (HTx) patients. We hypothesized that individual transplant center practice patterns within our local organ procurement organization (OPO) would result in differential number of transplantations and deaths for status 1 patients.

Methods: HTx patients listed as UNOS status 1 from 1/1/92 to 12/31/95 were analyzed (n = 637). Patients were compared by transplant center for age, sex, etiology of heart failure, blood type, times moved from status 1 (TM1), use of mechanical support (MS), total waiting list time (TWT), and total status 1 time (TST1) patient. We performed logistic and multiple regression analyses for significance of transplant center on the number of transplants and deaths after 90 days of TSt1.

Results: A total of 265, 96, 100, and 176 patients were listed at each transplant centers. Mean TST11 time was 36 ± 36 days, and mean age was 51 ± 12 yrs. Significant differences were observed between transplant centers in etiology of heart failure ($p = 0.03$), TWT ($p < 0.001$), TST1 ($p < 0.001$), and TM1 ($p < 0.001$). After adjusting for baseline differences, the transplant center remained a significant predictor of transplant ($p < 0.001$) and death ($p < 0.001$) after 90 days TST1.

Conclusion: In our local OPO, practice patterns between transplant centers significantly affected number of transplantations and deaths at 90 days TST1. It remains to be established whether this represents practice patterns nationally.

1097-54 Weekly Risk of Death While Awaiting Transplantation: Relationship to Support Required

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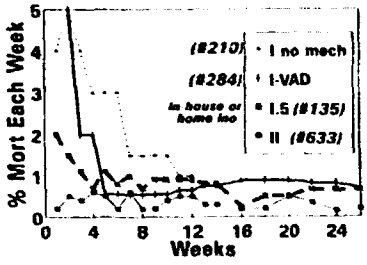
Background: The current system of priority implies a constant risk of death within a given status, but risks may change after listing.

Methods: Weekly mortality for 6 mos was determined for 978 pts without device at listing in the Pre-Transplant Database and 284 pts from the Heartmate (LVAD) registry. Non-LVAD pts were further divided into Status I, pts listed II but in hospital or on home IV inotropes (Status 1.5) and all other II.



Results: Weekly risk for Status II remained constant at 0.35 ± 0.14% for 24 wks. LVAD pts had ~10% weekly mortality for 2 wks, declining to 0.75% ± 0.20% risk after 5 wks. After 2 wks, weekly mortality was highest for Status I. Status I.5 pts had mortality comparable to LVAD pts but higher than Status II pts.

Conclusion: By the time most LVAD pts are listed, weekly risk is similar to that for pts hospitalized outside ICU's or on home inotropes, but intermediate between risk for other Status I and other Status II pts. Priority based on interval risks may decrease waiting list deaths.

1097-55 Post-transplantation Survival of Patients With Idiopathic Giant Cell Myocarditis (GCM) Versus Cardiomyopathy (CM)

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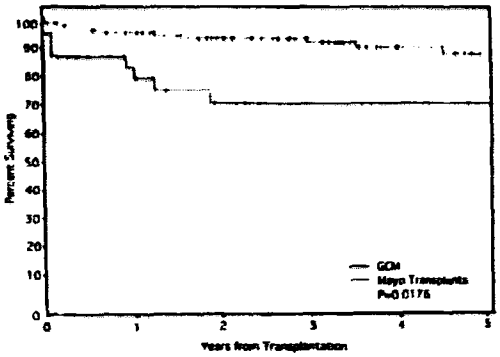
Background: Published data suggest survival of patients transplanted for acute myocarditis is worse than survival of patients transplanted for cardiomyopathy. We sought to test the hypothesis that patients with GCM have a worse post-transplantation survival than patients transplanted for CM. We identified 38 patients from the Multicenter Giant Cell Myocarditis registry who underwent transplantation (TX) and compared survival to 124 patients transplanted for CM at our institution.

Results: Mean age at transplantation of the GCM and CM groups were 41.2 ± 11.3 years and 48.6 ± 14.5 years (Student's T test, $p = 0.004$), and they were 53% and 19% female (chi square, $p = 0.001$). Kaplan-Meier survival was 88% and 71% at 5 years for the CM and GCM groups (Fig 1). Univariate analysis using the log-rank test demonstrated worse survival in the GCM group ($p = 0.0178$). Multivariate analysis using a Cox model adjusted for age and gender suggested that the survival was still worse in the GCM group ($p = 0.031$, RR 2.66, CI 1.05–6.76).



Conclusion: Survival is worse in patients transplanted for GCM than in patients transplanted for CM at our institution; However, most deaths occurred in the first 30 days postoperatively and post-TX GCM survival is comparable to survival in published TX registries. TX is an effective therapy for GCM.

1097-56 Long Term Effectiveness of Urgent Heart Transplantation (HTx) Compared With Elective HTx

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Background: Whereas attention has been focused on the influence of preoperative status on early survival after HTx, little is known about the possible long term impact of urgent versus elective HTx.

Methods: In 500 patients (pts) with severe CHF referred to our Center for eligibility for HTx (median follow up 45 months), survival was compared among pts maintained on optimal medical therapy (n = 287), pts who underwent HTx (n = 151), and pts listed for HTx but not transplanted (n = 62). In the group of pts that underwent HTx, long term survival was also compared between pts undergoing elective HTx (status 2: n = 95) and urgent HTx (status 1: n = 56).

Results: The proportions of pts surviving at the end of follow up were 99% in non listed pts, 88% in transplanted pts and 44% in listed and not transplanted pts. Cumulative probability of survival was 97% at 1, 2 and 3 years after elective HTx vs 92%, 94% and 70% at 1, 2 and 3 years respectively in status 1 recipients; at the end of follow up 95% vs 78% of pts transplanted are still alive ($p < 0.001$). Discriminant analysis revealed that pts who underwent urgent HTx had higher capillary wedge pressure (26.3 ± 9.0 vs 24.3 ± 12.8 mm Hg), higher bilirubin (2.65 ± 3.38 vs 1.70 ± 1.69 mg/dl) and lower sodium (126 ± 6 vs 130 ± 5 mEq/l). No statistically significant differences were detected regarding mean ischemic time (135.0 ± 48.3 vs 132.8 ± 52.5 minutes) and mean donor age (33.5 ± 12.3 vs 29.8 ± 13.3 years) between the two groups.

Comments: The long term survival of non-refractory CHF pts treated with optimal medical therapy is comparable with long term survival of refractory CHF pts treated with HTx. In status 1 candidates long term survival appeared