



SURVIVAL OF HEART TRANSPLANT RECIPIENTS BRIDGED WITH LVAD SUPPORT BY GENDER

Oral Contributions
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Background: Gender differences in heart transplant (HT) outcomes are well known. However, differences among those bridged with LVAD (BTT) have not been well studied. We sought to examine the mortality differences in this population.

Methods: 3020 BTT HT patients (exclusions: < 18y, multiorgan, follow up loss) were identified from UNOS (2005-11) & stratified by sex. Survival was censored at 5y. Multivariate Cox proportional hazard regression analysis was adjusted for age, DM, ischemic time, ethnicity, dialysis, life support, wait time & HLA mismatch.

Results: Of 3020, 18% were women. Ischemic (22% & 45%, male (M) & female (F) respectively) & dilated cardiomyopathy (69% (M) & 49% (F)) were the most prevalent diagnoses. Women were significantly younger than men & were associated with lower BMI, less prior cardiac surgery, better renal function, & lower filling pressures (Table). There was a trend towards increased LVAD usage in women (p=0.054). Survival (1, 3, 5y) was: F (86, 78, 70%) & M (88, 81, 74%). Unadjusted HR for all-cause mortality was 0.85 (CI 0.68-1.07, p=NS). Multivariate analysis: HR 0.86 (CI 0.67-1.11, p=NS).

Conclusion: While prior studies have shown increased mortality in women with VADs, this study demonstrates that women surviving to HT have similar survival post-HT. While there was a trend towards increased LVAD utilization in women, this was not statistically significant. These findings are surprising in light of the Heartmate II availability, permitting use in those with lower BMI.

Table 1: Baseline Characteristics & Clinical Data of Patients Bridged to Heart Transplant by Sex

Recipient Characteristics	Overall (n=3020)	Female (n = 532)	Male (n = 2487)	P Value
Age, mean ± SD, y	51 ± 13	47 ± 14	52 ± 12	< 0.001
Race, No. white (%)	2676 (88%)	311 (58%)	1348 (54%)	< 0.001
Diabetes mellitus (DM)	818 (27%)	136 (26%)	695 (28%)	0.295
CCPD	16 (0.4%)	3 (1%)	13 (1%)	0.601
History of Prior Cardiac Surgery	1211 (40%)	177 (33%)	1040 (42%)	< 0.001
Donor age, mean ± SD, y	31 ± 11	31 ± 11	31 ± 11	0.622
BMI, mean ± SD, kg/m ²	27.6 ± 5.2	27.1 ± 5.0	27.7 ± 5.3	0.014
Ischemic Time, h				0.823
0-1	281 (9%)	30 (6%)	235 (9%)	
2	745 (25%)	131 (25%)	599 (24%)	
3	1147 (38%)	202 (38%)	942 (38%)	
≥4	757 (25%)	128 (24%)	633 (25%)	
Life Support				
LASP	97 (3%)	21 (4%)	78 (3%)	0.293
VAD	104 (3%)	27 (5%)	77 (3%)	0.024
Days waited - transplant, mean ± SD (median)	321 ± 31.8	375 ± 27.5	267 ± 32.1	0.403
Survival on waitlist, mean ± SD, mo/SE	1.3 ± 0.1	1.1 ± 0.1	1.3 ± 0.1	0.001
PAP, mean ± SD, mmHg	28 ± 11	27 ± 10	28 ± 11	0.124
PCWP, mean ± SD, mmHg	18 ± 10	17 ± 9	18 ± 10	0.028
UNOS Status 1	3018 (99.9%)	532 (99.8%)	2486 (99.9%)	0.220
History of Rejection	1228 (41%)	202 (38%)	1027 (41%)	< 0.001
Dialysis	90 (3.0%)	16 (3%)	71 (3%)	0.382
PRA ≥ 20%	300 (10.0%)	54 (10%)	246 (10%)	
Ataxadrome Listing Year				
2002	184 (6.1%)	30 (5.6%)	148 (6.0%)	
2006	241 (8.0%)	48 (9.0%)	241 (9.7%)	
2007	303 (10.0%)	58 (11.0%)	303 (12.2%)	
2008	342 (11.3%)	59 (11.0%)	342 (13.8%)	
2009	452 (15.0%)	88 (16.5%)	452 (18.2%)	
2010	506 (16.7%)	119 (22.4%)	506 (20.3%)	
2011	580 (19.2%)	129 (24.2%)	450 (18.2%)	
Cause of Death (Cardiovascular)	130 (4.3%)	30 (5.6%)	130 (5.3%)	0.206

* Kruskal-Wallis rank test used for continuous variables & chi-square test for categorical variables.