Purpose: Body mass index (BMI) is thought to have an important impact on waitlist and post-transplant mortality in children. Our aim was to investigate whether the impact of BMI varies by the etiology of the heart failure.

Methods: UNOS has 3,254 listings for primary, isolated heart transplant in patients 3-18 yrs old (1995-2012) with either congenital heart disease (CHD) or dilated cardiomyopathy (DCM). Patients were stratified into 4 groups based on BMI%ile-for-age (BMI%): underweight (BMI% < 5), normal weight (5-84), overweight (85-94), or obese (≥ 95). Waitlist and post-transplant outcomes were assessed.

Results: Obesity was more common among DCM patients (18.7% vs. 9.91%) while underweight was more common in CHD patients (20.0% vs. 15.7%, p<0.0001). Waitlist survival was unaffected by BMI% category among CHD patients; underweight (HR 1.3, 1.0-1.6) and obese (1.2,1,0.1-1.5) DCM patients had higher risk-adjusted mortality prior to discharge. Obesity (HR 1.8, 0.8-4.2) and underweight (1.9, 0.9-4.0) patients had higher risk-adjusted mortality, whereas obese CHD patients had lower mortality (0.5, 0.3-1.0). Higher BMI% was a significant predictor of coronary allograft vasculopathy (p=0.02), and diabetes (p=0.0006) in DCM (but not CHD) patients (Figure).

Conclusion: The impact of BMI% on waitlist and post-transplant mortality varies by diagnosis. Analyses of weight and nutritional status in heart failure and transplantation need to examine CHD and DCM patients separately. BMI alone is insufficient, and better measures of nutrition, causes of increased BMI (obesity vs fluid retention), and physical conditioning are required to better estimate risk.

Quality of Life and Burden in Caregivers at 3 Months After Left Ventricular Assist Device Implantation

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Purpose: The role of caregivers is important for the successful long-term support of patients with a Left Ventricular Assist Device (LVAD). Such long-term support can impact well-being of these caregivers. We aimed (1) to evaluate quality of life (QoL) of caregivers, and (2) to identify factors associated with caregivers’ QoL at 3 months after patients’ LVAD implantation.

Methods: Patients and their caregivers were recruited from a university hospital in Japan between December 2011 and August 2014. The QoL of patients and their caregivers was assessed with SF-8. The physical and mental component summary score (PCS and MCS) were calculated, with higher scores indicating better QoL (range, 0-100). Caregiver burden was evaluated by the 8-item Zarit Caregiver Burden Interview, with higher scores indicating higher burden (range, 0-32). These outcomes were evaluated preoperatively and 3 months after LVAD implantation. We performed Student’s t-test to evaluate difference of QoL before and after implantation. Pearson’s correlation coefficient and multivariate regression analysis with backward selection were used to identify factors related to caregivers QoL.

Results: Data was collected in 56 LVAD patients and caregivers (patients, 40±12 years, male 78%; caregivers, 47±14 years, male 25%). Implanted LVADs were 8 HeartMateII (29%), 12 EVAHEART (42%), and 8 DuraHeart (29%). Compared with the preoperative period, caregiver’s MCS at 3 months after LVAD implantation improved (n=26, 40.0±8.9 vs. n=28, 44.2±8.0, p=0.06), but it was still lower than that in Japanese national norms (49.4±6.8, p<0.01). Meanwhile, PCS was comparable to that in Japanese national norms (49.9±6.9 vs. 48.6±7.2). Five caregivers (18%) had mild to moderate burden of caregiving after discharge (the caregiver burden score ≥16) and the median score of the overall sample was low (4.0) (Q1-Q3, 2-9). Multivariate analysis showed that caregiver’s gender (female, β=-6.1, p=0.01) and higher...