post-Alb, post-Na, post-Hct and post-Inf could predict NC with a probability of 76.4%.

Conclusions: Persistent malnutrition, severity of heart failure, previous stroke and post LVAD infections were the key factors associated with NC development post LVAD.

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Does the "Obesity Paradox" in Chronic Heart Failure Fade after Mechanical Circulatory Support with Continuous Flow Devices: Analysis from the Interagency Registry for Mechanically Assisted Circulatory Support

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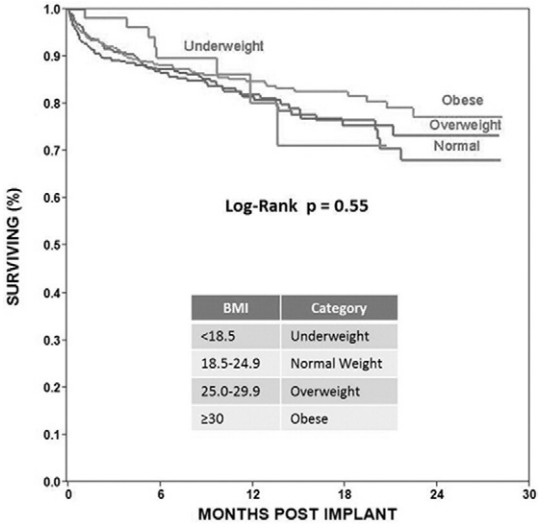
Purpose: In the "obesity paradox," overweight patients with chronic heart failure demonstrate increased survival as compared to their lean counterparts. Since the natural history of systolic heart failure is modified by mechanical circulatory support (MCS), we hypothesized that obese patients on continuous flow left ventricular assist devices (CF LVADs) would have equivalent survival.



Methods and Materials: 1435 patients implanted with a CF LVAD were identified from the Interagency Registry for Mechanically Assisted Circulatory Support (INTERMACS) and grouped according to BMI categories. Kaplan-Meier (KM) and adjusted Cox Proportional Hazards analyses were performed.

Results: The median BMI in this cohort was 27.9kg/m^2 with 37% obese. The obese patient was younger, more likely to have diabetes, and less likely to be in NYHA class IV on inotropes. Over a mean follow-up period of 9.4 months, mortality was 15.9%. In KM analyses, no difference in survival was observed among the BMI categories. After adjusting for relavant covariates including diabetes, we identified equivalent survival in the patient with a BMI $\geq$ 30 (RR 0.89, p=0.47). Diabetes remained a significant risk factor with the lean diabetic patient carrying the highest mortality risk (RR 2.01, p=0.0008, compared to the obese non-diabetic).

Conclusions: Survival with a CF LVAD is equivalent in patients with obesity and advanced heart failure. Future studies targetting other endpoints, including adverse events and recurrent hospitalizations, are necessary to determine if diet-induced obesity is a significant risk factor in selecting patients for long term MCS with CF LVADs.

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Everolimus for the Prevention of Microvasculopathy in Biopsy: Final Results from Re-Evaluation of the RAD B253 Trial

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Purpose: We recently presented preliminary data on the preventive effects of everolimus (EVE) on biopsy-proven microvasculopathy (MVP) after heart transplantation (HTx). Here we show the final analysis from re-evaluation of the European cohort of the RAD B253 Trial (EVE 3 mg or 1.5 mg vs. azathioprine [AZA] in primary HTx pts).

Methods and Materials: We studied 135 pts, mean age 56 yrs, and 567 biopsies harvested 1 wk (n=125), 4 wks (n=131), 3 months (n=128), 1 yr (n=101) and 2 yrs (n=82) after HTx. Acute cellular rejection (ACR; ISHLT) and both endothelial disease (endothelial cell layer at least as thick as its cell cores) and MVP (ratio of luminal radius to media thickness <1) were studied in routinely processed right ventricular biopsies (H&E, x200). Immunosuppression was evaluated by IIT analysis (EVE 1.5 mg=43, EVE 3 mg=46, AZA=46).

Results: Endothelial disease was diagnosed in 43%, 36%, 40%, 37%, and 35% of pts at 1 wk, 4 wks, 3 months, 1 yr and 2 yrs post-transplant. MVP was present in 56%, 71%, 73%, 75% and 71% of pts, respectively. During the 2-year follow-up, MVP was less frequent in pts on EVE 1.5 mg or EVE 3 mg vs. AZA (68% vs. 64% vs. 74%; p=0.031). Biopsy follow-up at 3 months and 1 yr was sufficient to indicate preventive events of EVE (71% [1.5 mg] vs. 65% [3 mg] vs. 83%; p=0.031). Single-step analysis at 3 months after HTx revealed MVP to be less frequent in pts on EVE than pts on AZA (70% [1.5 mg] vs. 61% [3 mg] vs. 84%; p=0.049). Endothelial disease at 4 wks (p=0.045) and 3 months (p=0.047) post HTx was correlated with MVP in consecutive biopsy follow-ups and correlated with concurrent MVP at 3 months after HTx ($p<0.001$). Endothelial disease was less frequent in EVE 3 mg-treated pts during the first post-transplant yr (34% vs. 45%; p=0.032). Both endothelial disease and MVP were correlated with ACR of any grade ($p<0.05$).

Conclusions: Everolimus suppresses MVP in biopsy early after HTx and seems to have preventive effects on endothelial disease, also. Its effects beyond the first post-transplant yr deserve further study.

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Effect of Everolimus Introduction and Calcineurin Inhibitor Reduction on Cardiac Allograft Vasculopathy Assessed by Virtual Histology

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Purpose: Immunosuppressant regimes centered on everolimus have been demonstrated to provide a quantitative reduction in cardiac allograft vasculopathy (CAV) amongst de-novo heart transplant (HTx) recipients. However, the effect of such therapy on CAV assessed by the qualitative method of Virtual Histology (VH) is unknown and was investigated in this prospective randomized-controlled trial.

Methods and Materials: In this 12-month multicenter Scandinavian study 190 maintenance HTx recipients were randomized to everolimus with reduced calcineurin inhibitor (CNI) exposure or continue standard CNI-therapy. Both groups continued their prior usage of azathioprine (AZA) or mycophenolate mofetil (MMF). 78 patients had evaluable VH examinations at baseline and 12 months and matched analysis was performed to measure change in fibrotic, fibrofatty, calcified and necrotic tissue component.

Results: When considering all 78 patients, mean age 57.4±10.3 years and mean time post-HTx 5.4±4.1 yrs, a similar rate of quantitative CAV progression was observed in the everolimus (n=30) versus standard CNI therapy