**EFFECT OF CONTINUOUS FLOW LEFT VENTRICULAR ASSIST DEVICE SUPPORT ON DIASTOLIC FUNCTION**

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Background: Continuous flow left ventricular assist devices (LVADs) have become the choice of therapy for end stage heart failure either as a bridge to transplantation, recovery or as destination therapy. It is known that systolic function is recovered in a small percentage of patients however the effect on diastolic function remains unclear. Here we present a small retrospective analysis of diastolic function in 10 patients

(9 males and 1 female) at 60 days post LVAD (Heartmate II) implantation.

Methods: Retrospective analysis was performed on tissue Doppler indices of diastolic function at a > 60 day period post LVAD implantation. Pre and post LVAD values were compared. We conducted a two-way anova with random effects for patient, and fixed effects for presence of LVAD. Alternately, this can be viewed as a repeated measures analysis in order to compare the average before and after LVAD implantation, controlling for individual differences between patients. A second analysis was done on post LVAD periods (60-180 days) to assess any linearity in the trend. The tissue Doppler parameters studied are Ea,Sa, EaxSa, Ea-Sa, Ea+Sa, Isovolumic relaxation time (IVRT) and left atrial volumes.

Resuts: The tissue Doppler parameters Ea,Sa, EaxSa, Ea-Sa, Ea+Sa, Isovolumic relaxation time (IVRT) and left atrial volumes were statistically unchanged ( p=ns) pre and post LVAD implantation at the time period studied.

Conclusions: No statistically significant change was noted in tissue Doppler parameters pre and post LVAD placement suggesting no improvement in diastolic function in this small sample.