Outcomes of Mechanical Circulatory Support in HIV Infected Patients from the INTERMACS Registry

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Abstract

Background and Purpose

- There is limited published data on the outcomes of HIV infected patients requiring mechanical circulatory support (MCS).
- The purpose of our study was to analyze outcomes in HIV infected patients enrolled in the INTERMACS registry.
- Comparisons were made with non-HIV infected patients.

Methods

- INTERMACS enrolled 10,542 primary prospective patients between June 23, 2006 and December 31, 2013. Of these, 20 were identified with a pre-implant HIV status.
- The difference in survival on a device for patients receiving continuous flow LV ADs with HIV that would be alive on a device, deceased, transplant, or recovered.
- Adverse event rates and infection rates by location were calculated by totaling the number of specific events observed in an early period (3 months post implant or transplant).

Selected Pre-Implant Conditions by HIV Status

- No = 6255
- HIV+ = 125

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Methods

- INTERMACS enrolled 10,542 primary prospective patients between June 23, 2006 and December 31, 2013. Of these, 20 were identified with a pre-implant HIV status.
- Two patients with pediatric flow devices were excluded from further analysis.
- Baseline characteristics (age, race, gender, device strategy, patient profile, time from implant to death or transplant) were compared for patients receiving continuous flow LV ADs with HIV+ (n = 18) and without HIV+ (n = 579). P-values were calculated using Fisher’s exact test or the Wilcoxon rank sum test.
- Adverse event rates and infection rates by location were calculated by totaling the number of specific events observed in an early period (3 months post implant or transplant) and last period (after 3 months post implant).
- The purpose of our study was to analyze outcomes in HIV infected patients enrolled in the INTERMACS registry.
- Comparisons were made with non-HIV infected patients.

Causes of Death of HIV Infected Patients

- HIV+ = 125

Comparison of HIV Patients – Died vs Alive

- No = 610
- HIV+ = 2

Patient Characteristics by HIV Status

- No = 9724
- HIV+ = 18

Survival Estimates

- No = 10542
- HIV+ = 0

Inferences

- Prior to implantation, HIV infected patients had higher prevalence of substance use and were more frequently identified as having contraindications to immunosuppression.
- Initial analysis (13 HIV patients, June 2006 - June 2013) indicated worse survival in HIV infected patients after MCS.
- Addition of more subjects and follow-up time (18 HIV patients, June 2006 - December 2013) attenuated this survival difference.
- After implantation, early and late infections and complications were more frequent in HIV infected patients.