Clinical characteristics and outcomes of patients requiring prolonged inotropes after LVAD implantation

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Introduction

Limited data exists regarding patients with LVAD support who require long- term inotropes. The primary objective was to evaluate the clinical characteristics and all-cause mortality of LVAD recipients with prolonged inotrope use (PIU), particularly those requiring outpatient inotropic therapy. Secondary endpoints were to compare preimplant characteristics and predictors of PIU, mortality, time to gastrointestinal bleed, infection and arrhythmias.

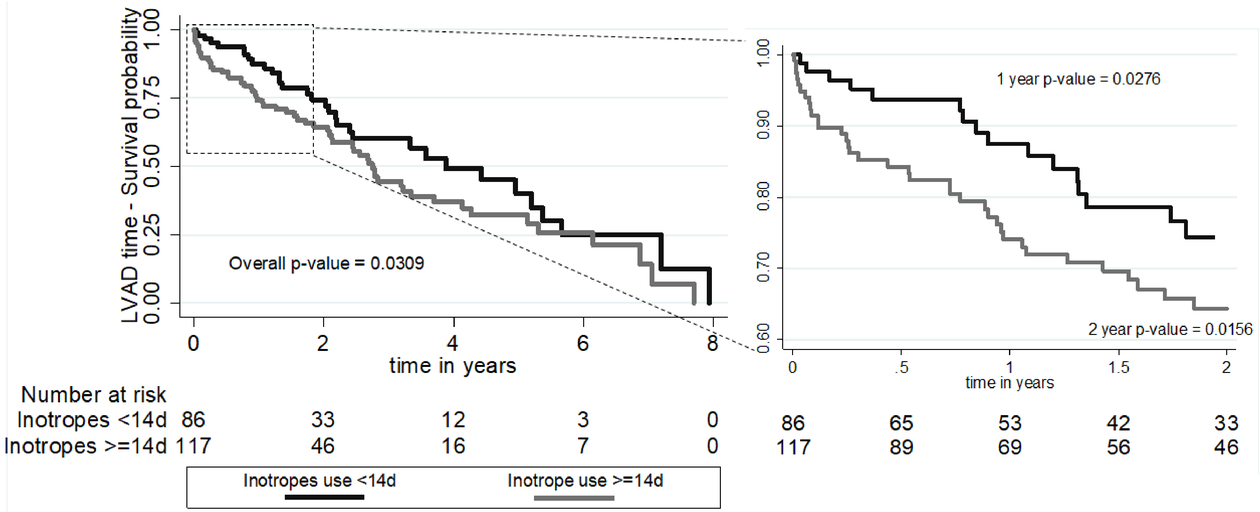
Methods

Retrospective cohort study on all adult patients with primary continuous flow LVADs implanted during January 2008 to February 2017 and follow-up through February 2018.

We defined PIU as ≥14 days of inotrope support and compared to those who required <14 days. Kaplan–Meier method, competing risk models and Cox-proportional hazard models were used and summarized with hazard ratios (HR).

Results

- Analytic sample was 203 patients, 58% required PIU and 10% were discharged on inotropes.
- No statistical difference in pre-implant characteristics.
- One-year survival rate was 87% if no PIU required, 74% if PIU required and 72% if discharged on inotropes.
- PIU was associated with longer length of stay and higher cumulative incidence of GI bleeding.
- We found no association between PIU and late re-initiation of inotropes, infection or arrhythmias.
- In multivariable analysis the hazard risk of death was increased in patients with PIU (HR=1.66, p=0.046), older age (HR=1.28, p=0.031) and higher creatinine levels (HR=1.60, p=0.007).



Conclusion

Prolonged inotrope use is frequently encountered following LVAD implantation and associated with adverse prognosis but remains a therapeutic option.