

VERY-LOW THRESHOLD FOR INDICATION OF TEMPORARY RVAD SUPPORT IN LVAD RECIPIENTS: TOWARDS A MONOVENTRICULAR PHILOSOPHY? A MULTICENTRE EXPERIENCE

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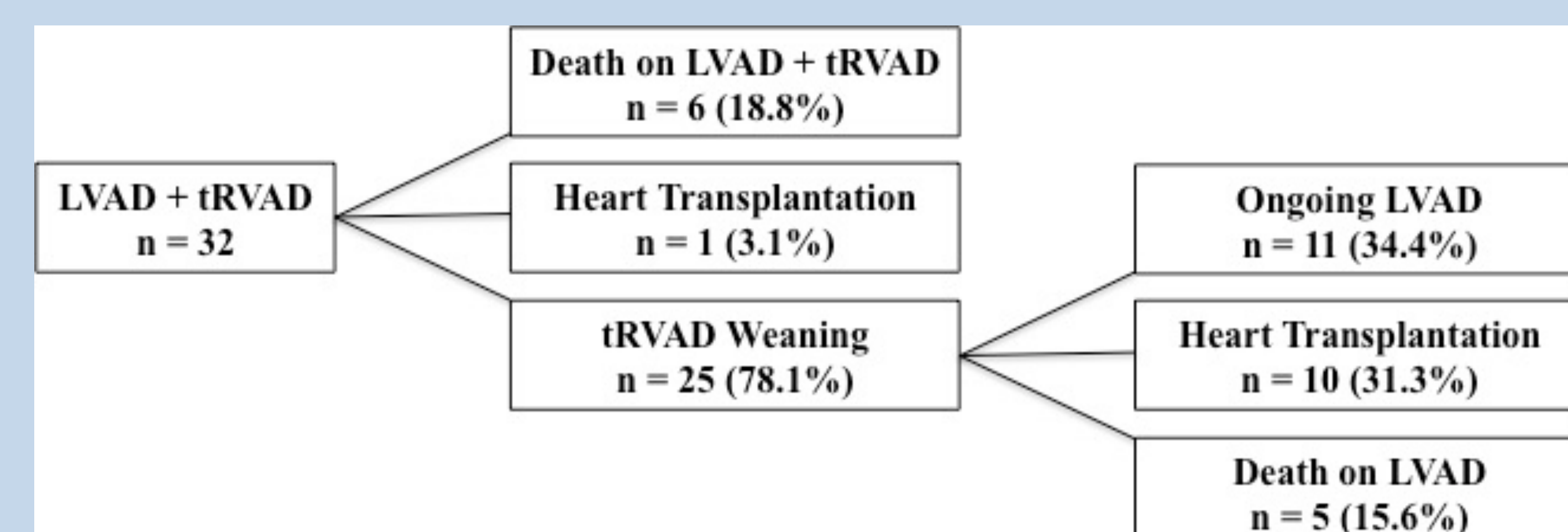
Left ventricular assist devices (LVADs) display better outcomes than biventricular assist devices (BiVADs) [1]. Right heart failure (RHF) represents a common finding in end-stage heart failure and a life-threatening complication after LVAD implantation [2]. The aim of this report is to describe our strategy of very-low threshold for indication of temporary right ventricular assist device (t-RVAD) support in LVAD recipients.

METHODS

We performed a retrospective observational analysis at three university hospitals. t-RVAD was represented by an extracorporeal membrane oxygenation established between the femoral vein and the pulmonary artery via a Dacron prosthesis according to an original technique.

RESULTS

Between March 2012 and September 2015, we implanted a t-RVAD in 32 LVAD recipients (mean age 54.2 years, males 87.5%). The indication for LVAD implantation was ischemic (n=14, 43.8%) or idiopathic (n=10, 31.2%) cardiomyopathy and other (n=8, 25%). INTERMACS profile was 1 (n=4, 12.5%), 2 (n=17, 53.1%), 3 (n=8, 25%) and 4 (n=3, 9.4%). Device strategy was bridge-to-transplantation (n=19, 59.4%), destination therapy (n=10, 31.3%), bridge-to-candidacy (n=2, 6.2%) and bridge-to-recovery (n=1, 3.1%). Mean RHF risk score was 3.0 ± 2.3 . Six (18.8%) patients died while on t-RVAD support (multiple organ failure n=2, intestinal ischemia n=2, hemorrhagic stroke n=1, gastrointestinal bleeding n=1). Twenty-five (78.1%) patients were successfully weaned off after a mean t-RVAD support of 8.2 ± 4.0 days. Weaning procedures were uneventful in awake patients on local anesthesia directly at bedside. No patient required a further mechanical circulatory support implantation for recurrent RHF. After a median follow-up time of 94.5 days, 11 (34.4%) patients were alive on LVAD support, 10 (31.3%) were successfully bridged to heart transplantation and 5 (15.6%) died on LVAD.



CONCLUSIONS

A very-low threshold implantation of t-RVAD is a safe and valuable strategy in LVAD recipients with a satisfactory short-term survival rate in such a critically ill population.

REFERENCES

- [1] Cleveland JC Jr, et al. J Heart Lung Transplant 2011;30(8):862-9
- [2] Dandel M, et al. Int J Cardiol 2015;198:241-50