

MEETING ABSTRACT

Open Access

# Three-year outcomes with left ventricular assist devices in country with restricted heart transplantation

Assel Medressova\*, Serik Bekbossynov, Muradym Murzagaliyev, Saltanat Dzhetybayeva, Saltanat Andossova, Makhabbat Bekbossynova, Yuriy Pya

From World Society of Cardiothoracic Surgeons 25th Anniversary Congress, Edinburgh  
Edinburgh, UK. 19-22 September 2015

## Background/Introduction

As a consequence of limited donor availability, there has been a growing interest for alternative strategies, such as left ventricular assist devices (LVAD) as either a bridge to transplantation (BTT) or as destination therapy (DT) for the treatment of the advanced heart failure. The heart transplant program in Kazakhstan is in a nascent stage and therefore patients that are determined to be BTT are expected to have an extended duration of LVAD support.

## Aims/Objectives

The objective of this study was to determine outcomes of patients with left ventricular assist devices in country with restricted transplantation.

## Method

We analyzed outcomes for 135 patients between November 2011 and November 2014 (mean age =  $50,5 \pm 13,5$  years old; Heart Mate II = 95 (70,4%), HeartWare = 40 (29,6%)). The median duration of support is  $474 \pm 329,4$  days.

## Results

In 75 patients (55,6%) the LVAD is used as a BTT and in 60 (44,4%) as a DT, but only 3 of 135 LVAD patients were transplanted. Before 30 days after implantation of LVAD right ventricular failure ( $n = 20, 14,8%$ ), renal failure ( $n = 19, 14,1%$ ) and bleeding (requiring reoperation = 10, 7,4%, requiring transfusion of packed red blood cells  $\geq 4U = 23, 17,04%$ ) were the most common adverse events. After 30 days driveline infections ( $n = 46, 34,1%$ )

and strokes ( $n = 33, 24,44%$ ) were the most common complications. Cumulative survival rates at 1, 6 months, 1, 2 and 3 years after LVAD implantation is 93%, 86%, 77%, 62% and 51% accordingly. Older age and more acute INTERMACS profiles were related to reduced survival.

## Discussion/Conclusion

The Center's experience shows that LVADs can be implanted as an alternative to heart transplantation with the outcomes that are comparable to those in existing world centers of excellence.

Published: 16 December 2015

doi:10.1186/1749-8090-10-S1-A32

Cite this article as: Medressova et al.: Three-year outcomes with left ventricular assist devices in country with restricted heart transplantation. *Journal of Cardiothoracic Surgery* 2015 **10**(Suppl 1):A32.

Submit your next manuscript to BioMed Central  
and take full advantage of:

- Convenient online submission
- Thorough peer review
- No space constraints or color figure charges
- Immediate publication on acceptance
- Inclusion in PubMed, CAS, Scopus and Google Scholar
- Research which is freely available for redistribution

Submit your manuscript at  
[www.biomedcentral.com/submit](http://www.biomedcentral.com/submit)



National Research Center for Cardiac Surgery, Astana, Kazakhstan



© 2015 Medressova et al. This is an Open Access article distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/4.0/>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited. The Creative Commons Public Domain Dedication waiver (<http://creativecommons.org/publicdomain/zero/1.0/>) applies to the data made available in this article, unless otherwise stated.