

MEETING ABSTRACT

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

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## 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.

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