Abstract: **P1844**

**Ex vivo allograft perfusion for heart transplantation: single centre experience**

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Purpose: The Organ Care System (OCS) is the only clinical platform for ex-vivo allograft perfusion. Kazakhstan is the 9th largest country in the world, for donor hearts to be transplanted from distant regions to our Center they often need to be transported up to 2000 km. We reviewed our institutional experience to analyze and describe the outcomes of patients underwent heart transplantation managed with OCS.

Methods: In this study we performed a prospective descriptive analysis of 59 patients underwent heart transplantation from 2012 to 2017. Of this, 47 (80%) cases were preserved using OCS. There are currently two methods for ex vivo preservation of donor hearts: standard cold storage (short distances, < 4 hours) and a system for ex vivo perfusion (long distance < 4 hours and after VAD). Primary and secondary outcomes of interest included cumulative survival, freedom from any-treated rejection (ATR), and non-fatal major cardiac events (NF-MACE).

Results: ex vivo preservation of donor hearts using standard cold storage 12 (20%) cases, distant procurement 35 (60%) cases, after VAD support to HTx 25 (45%) cases. Kaplan–Meier survival estimates for all patients after HTx using OCS heart were 91% after 3 months, 85% after six months and 80% after twelve months. There was no ATR, and NF-MACE.

Conclusions: Severe limitations on donor eligibility, recipients after VAD, optimised myocardial protection and use of a portable ex-vivo organ perfusion platform can enable successful, distantly procured transplantation of hearts. This study can further be followed up by studying the HT outcomes after OCS in subgroups.