

COST-EFFECTIVENESS OF A PREHABILITATION PROGRAM IN PATIENTS LISTED FOR HEART TRANSPLANTATION

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INTRODUCTION

Patients on waiting list for Heart Transplantation (HT) benefit from prehabilitation programs to improve their physical condition prior to HT. Implementation of prehabilitation program in advanced heart failure patients is resource consuming and could represent an economical burden. The aim of this study is to evaluate cost-effectiveness of an ambulatory multimodal prehabilitation program for HT candidates.

METHODS

We performed a cost analysis of a prehabilitation program consisting of supervised exercise training, nutritional optimization and psychological support in patients undergoing elective HT in a single centre from 2017 to 2021. Healthcare use included cost of prehab and hospitalization for HT measured by micro-costing techniques and hospital specific fees. Costs of program included gym facilities, physiotherapist and nutritionist fees, protein supplementation and psychology fees. We compared total cost of patients attending prehabilitation (n=31) with a group of patients who did not attend prehabilitation or were transplanted before the implementation of the program (n=51). To control for skewness of distribution, a bootstrapping approach was performed.

RESULTS

Median cost of prehab was 2,032€/per patient [IQR1,393-3,480]. Median cost per patient was lower in prehab-group than in control-group (49,770€[vs. 66,556±33,593€, $p=0.12$). Bootstrapping showed non-significant differences in costs (Mean:2,248€ 95%CI 10,952–15,010; $p=0.37$). Main savings were driven by shorter ICU stay (7 vs. 5 days, $p=0.01$) and total LOS (23 vs. 18 d, $p=0.008$) and a reduction in pharmacy and blood costs.

CONCLUSIONS

Multimodal prehabilitation program in patients awaiting HT could improve clinical outcomes without increasing costs. The cost of the program would be compensated by less postoperative complications.