

P269

P269 -Intradialytic cycling: putting the brakes on the rising costs of hospital resources

Mr Adam Hurt¹, Dr Daniel March^{1,2}, Ms Charlotte Grantham¹, Dr Alice C Smith^{2,3}, Mrs Nicola Cooper³, Dr James O Burton^{1,2,4}

¹Department of Cardiovascular Sciences, University of Leicester, Leicester, United Kingdom, ²John Walls Renal Unit, University Hospitals of Leicester NHS Trust, Leicester, United Kingdom, ³Department of Health Sciences, University of Leicester, Leicester, United Kingdom, ⁴School of Sport, Exercise and Health, Loughborough University, Loughborough, United Kingdom

Background

Haemodialysis patients have complex medical needs, with an increased reliance on secondary care. Reducing hospital admissions, length of stay (LOS) and prescribed medications can improve patient outcomes and decrease the financial burden on the NHS. The aim of this health economic analysis is to investigate the effect of a 6-month programme of intra-dialytic cycling exercise (IDE) on health care utilisation and cost.

Methods

This is a retrospective analysis of 82 patients enrolled in CYCLE-HD, a randomised control trial investigating the benefits of IDE. Patients were randomised to either a 6-month programme of IDE (thrice weekly, moderate intensity cycling) or standard care. Data on hospital admissions, LOS, clinic appointments, A&E attendances, and prescribed medications were extracted from medical records for the 6-months before, during and after the IDE intervention. Charlson Comorbidity Index (CCI) scores were calculated for both groups at trial enrolment. Hospital admissions, LOS are presented as mean (95% confidence interval).

Results

Data from 82 patients (control n=41 and IDE n=41) were included in our analysis (complete case). Time-series with incomplete data sets were excluded. Number of co-morbidities between groups was similar at trial enrolment with CCI scores of 4.7 (4.19 to 5.19) and 4.2 (3.62 to 4.81) for control and IDE respectively. The mean cost per patient between groups over time is shown in Figure 1. In the 6-months before, and during the IDE intervention, costs were comparable. In the 6-months after completion of the exercise programme, there was a mean difference in cost between the groups of £4,337.98 (£8275.39 + £2,911.67 vs. £3,937.41 + £1,316.03), in favour of IDE. Similarly, in the post intervention period both the mean number of admissions per patient (1.0 (0.6 to 1.4) vs 0.5 (0.2 to 0.8)) and the total LOS (6.9 (8.6 to 5.1) vs 6.3 (8.0 to 4.5) days) were reduced. Prescribed medication costs between both groups was similar post intervention.

Conclusions

These data show the positive health economic impact of a 6-month of programme intra-dialytic cycling exercise. The overall reduction in cost in the IDE group is driven by a reduction in both hospital admissions and length of stay (3-days) compared to controls. The results of this analysis strengthen the argument that intra-dialytic exercise programmes should be part of routine practice; this will be of critical importance to commissioners of dialysis care.