Implementing An Exercise Program Into The Routine Care Of Outpatient Dialysis Patients

Dan HRISTEA[1] & Thibault DESCHAMPS[2]

[1] ECHO Association, Dialysis Unit Laënnec , Nantes , France.
[2] Laboratory « *Movement, Interactions, Performance* » (E.A. 4334), University of Nantes, France

OBJECTIVES

Exercise has multiple well documented benefits for dialysis patients and international guidelines recommend physical activity as part of the management of chronic kidney disease [1] . However dialysis centers who offer exercise training programs are rare, despite of the feasibility of implementing exercise programs for these specific populations [2,3].

We present a ready to use procedure for the implementation of a one year intra-dialytic cycling exercise program in a dialysis unit. The aim of the trial is **to investigate the effect of the program on patient's functional performances, quality of life and to assess its cost effectiveness.**

METHODS

Screening

400 hemodialysis patients of 3 dialysis units Western France

Routine clinical check-up

No counter indication to exercise

Recent cardiologic check-up

Information

About potential benefits, modalities and risks of the training program

Assessment of the number of volunteer patients

Initial visit by the exercise referent

Physical Activity Questionnaire (IPAQ)
Six Minute Walk Test (6MWT)
Quality of life assessment using the KDQOL score.

Estimation of the targeted moderate exercise intensity

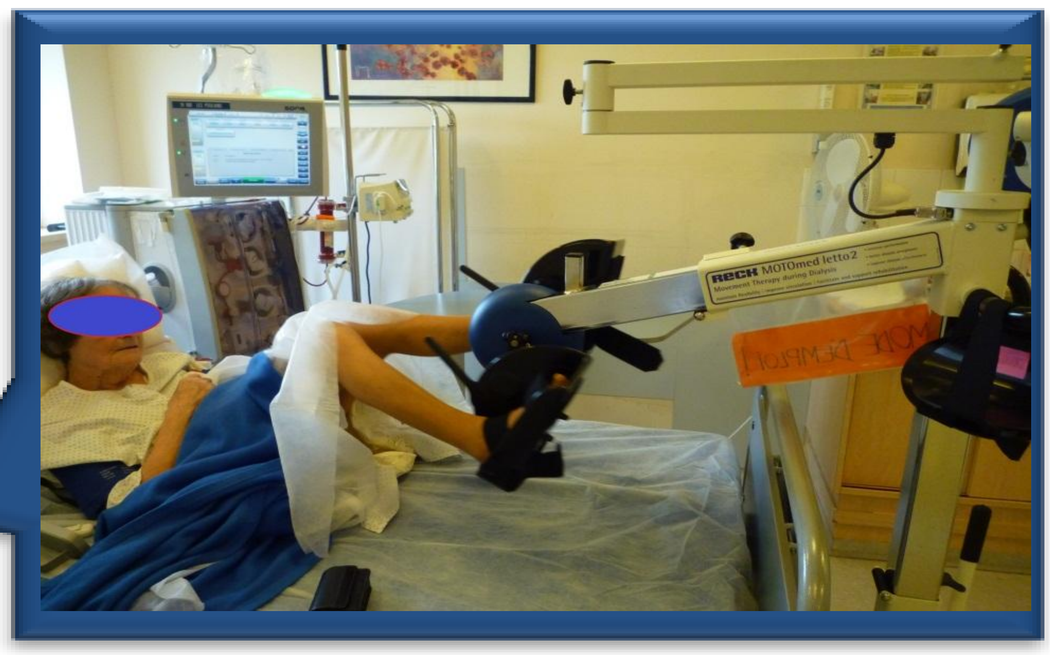
Standardized protocol with increasing resistance on the cycle-ergometer

Written prescription for a cycling exercise program

Frequency written prescription / Intensity / Duration of each training session

Update of the exercise prescription

Every 4 weeks



Follow up visit at 4 and 8 months

The patient performs a 6MWT and is informed about the evolution

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Final visit at 12 months

Physical Activity Questionnaire (IPAQ)
Six Minute Walk Test (6MWT)
Quality of life assessment using the KDQOL score

RESULTS

The number of patients who can be involved in an intra-dialytic physical activity program in an outpatient dialysis unit will be assessed.

Tolerance, compliance and side effects of exercise will be monitored. All the functional measures will be statistically compared as a function of time (t0 *vs*. t+12 months). A medico-economic analysis will be carried out.

CONCLUSIONS

This trial will investigate the efficacy, safety, feasibility, tolerance, and cost of an intra-dialytic cycling exercise program in an out-patient dialysis facility. **Significant improvements in clinical relevant features at a reasonable cost are expected.**

We hereby hope to reveal useful information for the conception of future exercise programs and find new arguments for the integration of this intervention into the standard of care of dialysis patients.

[1] Fouque D, Vennegoor M, ter Wee P, et al. EBPG guideline on nutrition. *Nephrol Dial Transplant* 2007, 22:ii45–87.

[2] Hristea, D Deschamps T, Paris A, et al. Combining intra-dialytic exercise and nutritional supplementation in malnourished older hemodialysis patients: Towards better quality of life and autonomy. Results from the pilot randomized ACTINUT trial. *Nephrology, Nephrology (Carlton).* 2016 Feb 18. doi: 10.1111/nep.12752.

[3] Sheng K ,Zhang P, Chen L, et al. Intradialytic Exercise in Hemodialysis Patients: A Systematic Review and Meta-Analysis *Am J Nephrol* 2014;40:478-490

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