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LONG-TERM INTRADIALYTIC CYCLING AND THE IMPACT ON QUALITY OF LIFE.

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INTRODUCTION: Patients receiving maintenance haemodialysis suffer from a variety of comorbidities which can contribute to decreased independence, sedentary behaviour and poor quality of life (QOL). Exercise therapy has the potential to ameliorate many of these common issues but research in this area has tended to focus on those patients at minimal risk and is often evaluated over only short-term periods. This study aimed to evaluate the long-term effects of a physiotherapist lead cycling programme on quality of life in a representative sample of haemodialysis patients.

METHODS: Twenty Four patients were recruited to the study. Fourteen Patients (age: 70.5 ± 17.3 years, BMI: 29.5 ± 6.0) participated in the exercise programme and ten patients acted as routine care controls (age: 67.8 ± 11.1 years, BMI: 28.6 ± 7.0). Patients completed a Medical Outcomes Short Form 36 (SF-36) to assess QOL at baseline. Intradialytic cycling was conducted on a MOTomed letto2 cycle ergometer during the first hour of dialysis treatment. Patients cycled for a target time of 20 minutes at individualised, progressive, low to moderate intensities supervised by a physiotherapist. Routine clinical markers and QOL was evaluated for all patients after 1 year. Data was analysed using a repeated-measures ANOVA.

RESULTS: Improvements in QOL were demonstrated in all aspects of the SF-36 in the exercising group with percentage improvements ranging from 5 – 125%. Significant differences were seen between the exercise and routine care groups for both mental health composite scores (P = 0.043) and for social functioning (P = 0.050) aspects of the SF-36 assessment. Effects on other aspects of quality of life were not significantly different between the groups.

CONCLUSION: Intradialytic cycling substantially improves the long-term QOL in a wide spectrum of haemodialysis patients, representative of the dialysis population as a whole. Significant improvements in social functioning and mental health are of particular importance for older dialysis patients who are more likely to suffer feelings of isolation and suffer a loss of independence. The most important finding of this study was that it is feasible to embed intradialytic cycling into the routine care of almost all haemodialysis patients and that it offers long-term benefits in QOL for those patients.