

Combatting Sedentary Lifestyles: Can Exercise Prescriptions in the Emergency Department Lead to a Behavioural Change in Patients?

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Introduction

Patients with chronic diseases such as COPD, coronary artery disease, depression and anxiety are known to benefit from exercise. They also frequently visit the emergency department (ED). Despite the large therapeutic window and evidence supporting its role in disease management, there are few studies examining prescribing exercise in the ED. We asked: Is exercise prescription in the ED feasible and effective?

Methods

In our pilot prospective block randomized trial, consented patients were divided into control or intervention groups. The control group received routine care. The intervention group received combined written and verbal prescription for moderate exercise (150 minutes / week). Both groups were followed up by phone at 2 months. The primary outcome was achieving 150 min of exercise per week. Secondary outcomes included change in exercise, and differences in reported median weekly exercise. Comparisons were made by Mann Whitney, Fishers tests (GraphPad).

Results

We recruited 28 ED patients. Follow up was completed for 22 patients (11 Control; 11 Intervention). Baseline reported median (with IQR) weekly exercise was similar between groups; Control 0(0-0)min; Intervention 0(0-45)min. There was no difference between groups for the primary outcome of 150min/week at 2 months (Control 3/11; Intervention 4/11, RR 1.33 (95%CI 0.38-4.6;p=1.0). There was a significant increase in median exercise from baseline in both groups, but no difference between the groups (Control 75(10-225)min; Intervention 120(52.5-150)min;NS)

Further analysis revealed that 3 control patients had been given an exercise prescription (as part of routine care). A post hoc comparison of patients receiving intervention vs. no intervention, revealed a significant increase in patients meeting the primary target of 150min/week (No intervention 0/8; Intervention 7/14, RR 2.0 (95%CI 1.2-3.4);p=0.023).

Conclusion

Recruitment was feasible, however our study was underpowered to quantify an estimated effect size. As a significant proportion of the control group received the intervention (as part of standard care), any potential measurable effect was diluted. The improvement seen in patients receiving intervention and the increase in reported exercise in both groups (possible Hawthorne effect) suggests that exercise prescription for ED patients may be beneficial.