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Multimodal home-based prehabilitation for colorectal cancer patients with short surgery wait times: a pilot service and retrospective case-controlled study

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BACKGROUND:

Prehabilitation is a needs based personalised intervention before and during cancer treatment to optimise physical, psychological and nutritional status supported by behaviour change psychology. Enhanced readiness and tolerance of treatments may reduce complications, hospital length of stay (LOS), improve recovery and/or quality of life (QoL) and decrease cost of care. Short wait times for colorectal cancer surgery creates challenges for implementing prehabilitation guidelines. This pilot service evaluated the feasibility of multimodal home-based high intensity interval training (HIIT) with high frequency (>5 days/week) to optimise patients within short surgery wait times (<4 weeks).

METHODS:

Twenty-six patients received personalised home-based structured exercise, breathing and pelvic floor exercises, dietetic and psychological support. Each patient was retrospectively matched with two non-intervention patients based on age at surgery, sex, and surgical procedure. Outcomes: LOS and cost of care, functional walking capacity (6MWT), sit-to-stand test, body-composition, self-efficacy for exercise, anxiety/depression (PHQ-4), malnutrition status (PG-SGA), QoL (EQ-5D-5L), adherence, sedentary behaviour, affect regulation and patient satisfaction. Distribution dependant appropriate statistics (mean±SD; median/range; paired t-tests; $p < .05$).

RESULTS:

Patients who had higher intervention adherence had improved physical, nutritional and psychological scores in comparison to those who had moderate and low adherence. LOS was reduced and resulted in a cost neutral service. The intervention was safe and enjoyable and patient satisfaction was very high. No adverse events occurred.

CONCLUSION:

Multimodal home-based HIIT prehabilitation with high frequency appears feasible and safe to be implemented unsupervised and at scale within reduced surgery wait times. Behaviour change psychology to promote adherence is essential in home-based settings. Optimal results may require >4 weeks of physical exercise and early referral is vital. A larger RCT is required to confirm these initial findings.

Keywords

Prehabilitation, Colorectal Cancer, Multimodal, Implementation

Conflict of Interest & Ethical Approval

yes

Abstract submitters declaration

yes

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