IMPACT OF A TRIMODAL PREHABILITATION PROGRAM ON FUNCTIONAL RECOVERY AFTER HEPATOBIILIARY AND PANCREATIC CANCER SURGERY: PRELIMINARY FINDINGS FROM A RANDOMIZED CONTROLLED PILOT TRIAL

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INTRODUCTION

- Multimodal prehabilitation has been successful in improving postoperative functional outcomes in patients undergoing cancer surgery.
- No studies have evaluated the impact of a trimodal prehabilitation program on six-minute walk distance and appendicular skeletal muscle index in patients awaiting surgery for hepatobiliary and pancreatic cancer.

METHODS

- A single-centre, parallel-arm randomized controlled pilot trial was conducted. Patients were assigned to either the prehabilitation (prehab) or rehabilitation (rehab) group.
- The prehabilitation group began the interventions 4 weeks before surgery. The rehabilitation group began the same interventions (minus once-weekly supervised exercise) immediately after surgery.
- Both study arms continued the program for 8 weeks after surgery. There were 4 study visits (Figure 1).

RESULTS

Baseline			
	Prehab n=17	Rehab n=18	p
Age (y)	58.4 (15.8)	61.9 (11.8)	0.64
Six-minute walk test (m)	510.2 (96.8)	479.7 (104)	0.38
Appendicular skeletal muscle index (kg/m ²)	6.58 (1.03)	6.98 (1.14)	0.29
	n (%)	n (%)	p
Sex			
Male	11 (64.7%)	14 (77.8%)	0.47
Female	6 (35.3%)	4 (22.2%)	
Diagnosis			
Liver	7 (41.2%)	11 (61.1%)	0.24
Pancreatobiliary	10 (58.8%)	7 (38.9%)	
Neoadjuvant chemotherapy			
Yes	9 (52.9%)	11 (61.1%)	0.63
No	8 (47.1%)	7 (38.9%)	

Data presented as mean (SD) or n (%).

Figure 2: Six-minute walk test change from baseline

Figure 3: Appendicular skeletal muscle index change from baseline

Repeated measures ANOVA, n= 35, controlled for age, sex, diagnosis, total hospitalization days. Data reported as mean ± standard deviation. * denotes significance p<0.05.

CONCLUSION

- A prehabilitation program in patients awaiting surgery for hepatobiliary and pancreatic cancer can:
 - deliver meaningful changes in six-minute walk distance pre and postoperatively;
 - preserve appendicular skeletal muscle mass postoperatively.