

Carli, F., C. Gillis, and C. Scheede-Bergdahl, Promoting a culture of prehabilitation for the surgical cancer patient. *Acta Oncol*, 2017. 56(2): p. 128-133.

OVERVIEW AND METHODS:

The traditional approach to rehabilitation for perioperative cancer care has focused on the postoperative period to facilitate a return to baseline function.

The preoperative period may be more effective time to target a patient's physiological condition to help them better overcome the effects of surgery.

This is a narrative review of the current literature on surgical prehabilitation with discussion of the current evidence of preoperative interventions before cancer surgery to increase physiological reserve.

Principle literature search included MEDLINE, Embase and Cochrane databases to identify publications related to this topic from January 1999 to May 2015. Medical Subjective Headings were used for the patient group, interventions, and outcomes. Keywords included exercise, perioperative nutrition, prehabilitation and functional outcomes.

Three systematic reviews were found that included 12, 15, and 8 studies respectively.

FINDINGS:

1. Systematic review of 12 studies showed that preoperative exercise therapy can be effective for reducing postoperative complication rate and accelerating discharge from the hospital in patients undergoing cardiac and abdominal surgeries
2. Systematic review of 15 studies showed total body prehabilitation improved postoperative pain, length of stay, and physical function but was not consistently effective in improving HRQoL or aerobic fitness
3. Systematic review of 8 studies showed preoperative exercise improves physiologic function but with limited postoperative clinical benefit.
4. A recent pilot study followed by RCT, using a multimodal prehabilitation program consisting of moderate intensity physical activity, nutritional counseling, protein supplementation and anxiety reduction in patients undergoing colorectal resection showed that 80% of patients were able to return to preoperative functional capacity within 8 weeks compared to 40% of a control group.

Three core modalities of prehabilitation:

1. Exercise
2. Nutrition
3. Anxiety reduction

Data from these reviews highlight the potential impact that preoperative conditioning can have on functional capacity before and after surgery. Although structured exercise represents the major component of prehabilitation the additional of nutritional counseling and anxiety management, in conjunction with exercise, can help contribute to improved clinical outcomes.

LIMITATIONS OF STUDY:

1. Most studies included a small sample size
2. Studies included patients undergoing elective cancer surgeries
3. Studies were not all descriptive of the exercise modality used or the dosing of the exercise
4. Compliance with some exercise regimens was very low – 16% possible indicating that the exercise routine was not sustainable.

FUTURE RESEARCH:

1. What is the role of different types of exercise and what dosing is best for sub-groups of cancer
2. What is the cost-effectiveness of this prehabilitation approach
3. What is the impact on length of stay and hospital readmissions, perioperative complications, and adherence to adjuvant treatment

COMMENTS:

This article highlights the need for a multidisciplinary approach to prehabilitation – which needs to include a sustainable exercise program.

Can some of this research be used to promote better insurance coverage of preoperative rehabilitation to decrease risks of rehospitalization or decrease complications, better tolerance to postoperative adjuvant chemotherapy or radiotherapy?

How can we work better as an interdisciplinary team to better provide care to these patients preoperatively?

What is the role that Physical Therapy can have in the Multi-speciality teams for patients with cancer?

I look forward to the discussion!! What are your thoughts on this article?