288

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PELVIC FLOOR SYMPTOMS, PHYSICAL AND PSYCHOLOGICAL OUTCOMES OF PATIENTS UNDERGOING COLORECTAL CANCER SURGERY

Hypothesis / aims of study

In Australia, colorectal cancer (CRC) is the second most commonly diagnosed cancer in both males and females [1]. People with CRC often experience pelvic floor symptoms following surgery, including bladder, bowel and sexual dysfunction. These highly distressing and embarrassing symptoms can severely impact on the individual's daily activities and health-related quality of life (HRQoL). However, little is known about the pre – post-operative change in pelvic floor symptoms and physical and psychological outcomes, specifically in people undergoing surgical treatment for CRC in Australia. Therefore, the purpose of this study was to assess changes in pelvic floor symptoms, physical activity levels, psychological outcomes and HRQoL before and six months after CRC surgery.

Study design, materials and methods

This was a prospective observational study. Patients were eligible for inclusion if they had a histologically confirmed tumour nodal metastasis classification stages I-III CRC and were undergoing CRC surgery. All participants provided written informed consent before enrolment in the study. Pelvic floor symptoms (Australian Pelvic Floor Questionnaire and International Consultation on Incontinence Questionnaire Bowel module), physical activity levels (International Physical Activity Questionnaire), anxiety and depression (Hospital Anxiety and Depression Scale), and HRQoL (European Organization for Research and Treatment of Cancer Quality of Life Core Questionnaire [EORTC QLQ-C30] and the colorectal cancer module [QLQ-CR29]) of all participants were evaluated pre-operatively and six-months after surgery. Statistical analyses were conducted using paired-t tests. All analyses were tested with a significance level of $p < 0.05$.

Results

Thirty participants with a mean age (± standard deviation) of 56.0 ±15.2 years were enrolled between October 2013 and August 2015. The participants included 53% males, and 67% had a diagnosis of colon cancer. Thirteen percent of the cohort received chemotherapy and radiotherapy before surgery, and 40% received chemotherapy after surgery. The most common types of surgery were right hemicolectomy (30%), high anterior resection (27%), and ultra-low anterior resection (27%).

From pre- to six months post-operatively, there were no significant changes in overall pelvic floor symptoms, physical activity levels, depression, or HRQoL ($p > 0.05$). Six months after surgery, patients had less abdominal pain (mean difference = -15.3 ± 31.1, $p = 0.02$) and clinically less anxiety (mean difference = 11.1± 32.1, $p = 0.10$) compared to pre-operative levels. However hair loss (mean difference = 20.8 ± 30.8, $p = 0.003$), faecal incontinence (mean difference = 15.3 ± 32.6, $p = 0.03$), stool frequency, and symptoms of peri-anal sore skin and bowel embarrassment were significantly and clinically worse (changes greater than the minimal clinically meaningful differences).

Interpretation of results

Our study showed that compared to pre-operative levels, clinically meaningful deficits appeared with respect to stool frequency, hair loss, faecal incontinence, symptoms of sore skin, and bowel embarrassment six months after CRC surgery. These findings may be related to ongoing adjuvant chemotherapy. In contrast to the incidence of post-operative bladder, bowel, and sexual dysfunction observed by other studies [2, 3], no significant changes were found in overall pelvic floor symptoms six months after surgery in our study. This may be due to a higher percentage of patients treated for colon cancer compared to patients with rectal cancer (ratio 2:1) in our study. The primary limitation of this study is small sample size, which makes it difficult to conduct subgroup analyses in patients with rectal cancer versus colon cancer. Moreover, the findings of this study may not be generalized to all CRC population as the potential confounders (i.e. treatment sought by patients with pelvic floor symptoms, and comorbidities of patients) were not taken into account due to unavailable data.

Concluding message

Bladder and sexual function, physical activity levels, and anxiety and depression did not deteriorate six months after CRC surgery. However, there was significant worsening of specific bowel symptoms including incontinence. Further investigation in larger studies is warranted.

References

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Disclosures

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