ICCN 2023
International Conference on Cancer Nursing
SEP. 29 - OCT. 2, 2023 • Glasgow, UK

Surgery for Esophageal Cancer: Characteristics of Physical Activity in Elderly

Junko Honke[1,2] , Keiko Mori[1]

[1] *Okayama University, Japan* [2] *Hamamatsu University School of Medicine, Japan*

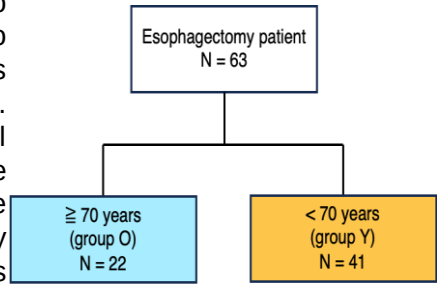
岡山大学 OKAYAMA UNIVERSITY 浜松医科大学 Hamamatsu University School of Medicine

Backgrounds

The incidence of esophageal cancer in Japan is highest among individuals in their late 70s to early 80s, and the patient population is aging. The authors use an activity tracker to support patients in maintaining and enhancing their physical activity before surgery. The purpose of the present study was to characterize elderly patients with esophageal cancer based on changes in perioperative physical activity (number of steps) and postoperative body composition.

Methods

We divided sixty-three patients who underwent esophagectomy into two groups according to age: ≥ 70 years (group O); and < 70 years (group Y). We compared perioperative physical activity and motivation to exercise (Behavioral Regulation in Exercise Questionnaire-2 [BREQ-2]) and body composition up to 6 months postoperatively.



Results

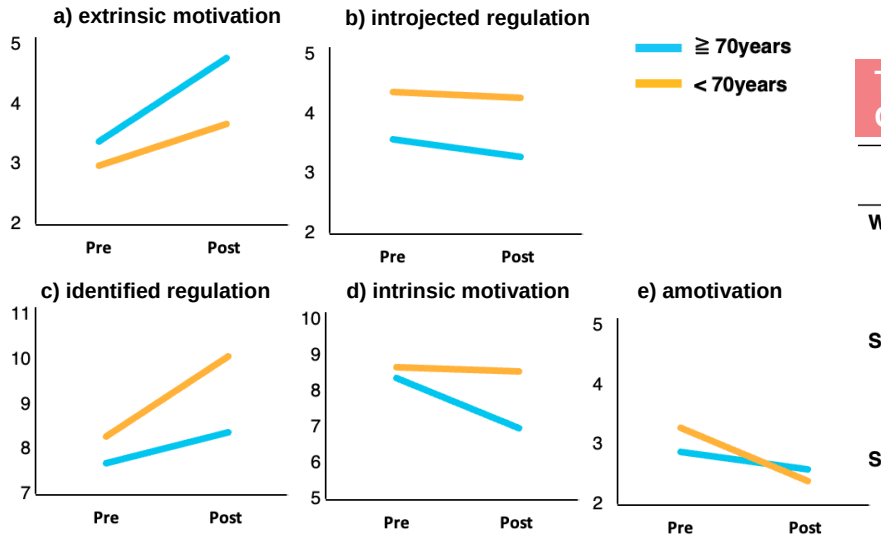
Although the mean number of steps taken by patients in each of the three preoperative weeks was not significantly different between the groups, it was significantly lower in group O in each of the five postoperative weeks (Figure 1) . The BREQ-2 demonstrated a trend toward a decrease in self-determined postoperative versus preoperative motivation in group O (Figure 2). There was no statistical difference in the rate of postoperative weight loss between the two groups. Muscle mass and skeletal muscle mass index (SMI) at 6 months postoperatively were significantly lower in group O (Table 2).

Patient characteristics

	≧ 70 years (n = 22)	< 70 years (n = 41)	P
Age	72 (71-76)	62 (59-65)	< .001
Male / Female	18 / 4	34 / 7	0.584
BMI (kg/m²)	21 (20-23)	22 (21-24)	0.325
Neoadjuvant Therapy	11 (50%)	17 (41%)	0.350
Habit of exercise	6 (27%)	6 (14%)	0.188

BMI Body mass index
Median (interquartile range: 25th percentile to 75th percentile)

Figure 2.
Perioperative BREQ-2※ motivational levels



※Each item on the BREQ-2 answers a 5-point scale for “not at all true” (1point) to “very true” (5point).

Figure 1.
Average steps per day during perioperative

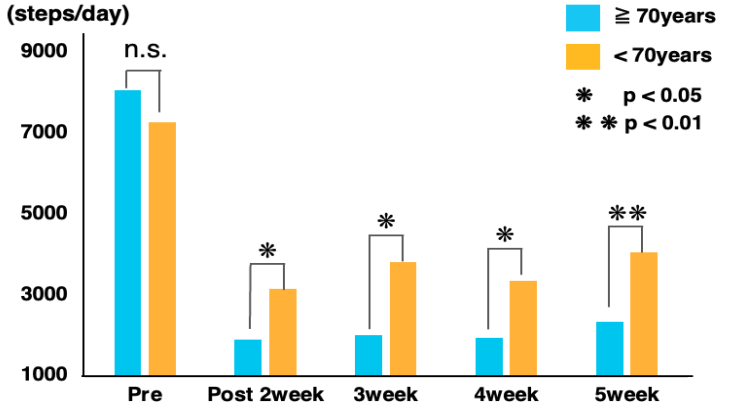


Table2.
Changes in postoperative body composition

	≧ 70 years (n = 22)	< 70 years (n = 41)	P
Weight loss rate (%)			
Post 3M	8.3 (4.8-12.2)	7.7 (5.5-11.8)	0.987
Post 6M	11.8 (7.0-15.5)	8.8 (5.9-12.0)	0.128
Skeletal muscle loss rate (%)			
Post 3M	8.3 (5.0-13.1)	7.0 (4.4-9.2)	0.184
Post 6M	6.6 (4.1-10.4)	4.8 (1.4-7.4)	0.053
SMI loss rate (%)			
Post 3M	8.3 (7.0-13.9)	6.6 (4.9-9.4)	0.093
Post 6M	9.1 (6.0-12.3)	3.8 (1.3-6.8)	0.003

SMI Skeletal muscle mass index
Median (interquartile range: 25th percentile to 75th percentile)

Conclusions

Postoperative decreases in skeletal muscle mass and SMI in elderly patients suggested that activity levels in this group remained low over the long term. Motivation to exercise and other factors influence physical activity levels. As such, it is necessary to further investigate factors impacting activity levels in elderly patients and to provide this population with individualized, tailored support.