ADHERENCE OF PATIENTS TO A MULTIMODAL PREHABILITATION PROGRAM IN RADICAL CYSTECTOMY

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Background and Goal of study

Enhanced Recovery After Surgery (ERAS) programs implement a series of interventions to optimize medical conditions, nutritional status and improve functional capacity in the preoperative setting to increase recovery and reduce postoperative complications.

The primary objective of this study was to assess the adherence to the multimodal prehabilitation program and the influence of age as a factor (<70 vs ≥ 70 yrs).

Secondary objective was to evaluate the correlation between a 6-minute walking test (6MWT) < 350m and postoperative complications in patients undergoing open or laparoscopic/robotic radical cystectomy (RC).

Patients and Methods

- This study included 47 consecutive patients enrolled in an ERAS protocol, each of whom underwent RC from December 2016 to November 2017.
- A prospective evaluation of the adherence to the preoperative program was performed on these items: correction of anemia, psychological support, stomatherapy education, smoking and alcohol cessation, nutrition supplementation, stretching exercises and aerobic training (evaluated by 6MWT).
- At the first prehabilitation visit (1 month before surgery), we provided advice about smoking and alcohol cessation and we optimized comorbidities including Iron Deficiency Anemia. Patients were given a booklet with all the information of the program where they had to report the frequency and duration of the exercises and the amount of protein taken. All patients underwent 6MWT.
- We measured the compliance to the program at the second visit (15 days later) based on the booklet reports. Changes in 6MWT were measured as well.
- At the last visit (30 days after hospital discharge), postoperative complications were observed and they were graded by severity using the Clavien-Dindo classification. Changes in 6MWT were measured again.

To compare means and percentages we used Mann Whitney U test and χ^2 test respectively. Statistical analysis was performed by SPSS software.

Results

Table 1. Clinical and Demographics characteristics

N	47
Age*	69.6 (7.9)
BMI*	27 (4.7)
Sex (M/F)	35 (74.5) / 12 (25.5)
ASA (I/II/III/IV)	2 (4.3) / 22 (46.8) / 20 (42.6) / 3 (6.3)
Hypertension	30 (63.8)
Coronary Heart Disease	6 (12.8)
EPOC	15 (31.9)
Smokers + non smokers	14 (29.8) / 20 (42.6)
Diabetes	11 (23.4)
Peripheral Arterial Disease	7 (14.9)
Cerebrovascular Disease	2 (4.3)
Chronic Kidney Disease	14 (29.8)
Hemoglobin before surgery*	135.7 (18.9)
Creatinine before surgery**	87 (72 - 113)
Prehabilitation time (days)**	31 (25 - 40)

* Mean (SD) ; ** Median (IQR)

Table 2. Relationship between 6MWT and overall complications

	OVERALL COMPLICATIONS	
	NO	SI
>350m	20 (48,8%)	21 (51,2%)
<350m	0	3 (100%)

p=0,239

Figure 1. Compliance rate to the prehabilitation program

Overall compliance to the preoperative items was 93.8%. No differences were found between patients <70yrs and ≥70yrs (91.8% and 95.3% respectively); p=0.212.

Conclusions

Our results showed a high adherence to the preoperative components of ERAS protocol regardless of age, probably due to highly committed multidisciplinary team.

The effectiveness of aerobic training to reduce postsurgical complications in RC should be investigated in future research with a large number of patients.