

## Implementation of enhanced recovery protocol (ERP) can reduce postoperative ileus (POI) for patients undergoing radical cystectomy

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**Introduction & Objectives:** Postoperative ileus (POI) is a common complication for radical cystectomy (RC) patients limiting the recovery and prolonging length of stay (LOS) in hospital.

The study aimed to evaluate the rate of POI at the time of ERP in place at North Estonia Medical Centre Foundation, Tallinn.

**Materials & Methods:** An ERP has been launched for patients undergoing open RC and ileal conduit or orthotopic bladder substitute formation at North Estonia Medical Centre, Tallinn since November 2015.

In this observational cohort study the rate of POI in pre- ERP cohort and ERP cohort has been compared.

Prospective data was collected from 58 consecutive patients undergoing RC and urinary diversion, from the ERP launch in November 2015 up to end of 2018. (ERP cohort). Retrospective data was collected from a pre-ERP cohort of 48 patients from 2014 to October 2015. (pre-ERP).

Key clinical criteria's of diagnosis for POI were ongoing nausea and vomiting, inability to tolerate an oral diet, absence of flatus and stool and abdominal distension which require nasogastric tube (NGT) placement.

ERP has introduced after detailed review of surgical care elements for treatment of invasive bladder cancer. The protocol is consisting altogether 13 elements which are those typically contain in enhanced recovery programs.

These care elements concern preoperative, intraoperative and postoperative pathway.

Data is presented as means with standard deviation (SD), medians with interquartile range or counts (percentages), as appropriate. The Chi-square test with Yates correction was used to compare the categorical variables.

**Results:** There were no significant differences in baseline patient characteristics nor urinary diversion methods between the two cohorts. The overall complications rate was similar.

The odds ratio has been calculated in order to analyze of proportion of cases of POI before and after introduction of the protocol. Odds of development ileus post operatively decreased by 0.44 times among this population. The difference of POI between cohorts was 16.8%, 95% CI (17% to 16.6%). Nevertheless,  $\chi^2$  analysis of the data showed that this difference was not statistically significant. The non-randomized historical data from pre-ERP cohort inevitably introduced different types of bias.

**Conclusions:** Our institutional enhanced recovery protocol is associated with tendency to lower POI. However, the result was not considered statistically significant.

Introduction of the ERAS protocol is clearly feasible for radical cystectomy patients and bigger sample size in the future can increase the power of the analyzes.