

## FACTORS AFFECTING INCIDENCE AND DURATION OF POSTOPERATIVE ILEUS IN PATIENTS UNDERGOING RADICAL CYSTECTOMY. A MULTIVARIATE ANALYSIS

Wiessner D.<sup>1</sup>, Litz R.<sup>2</sup>, Heller A.<sup>2</sup>, Koch T.<sup>2</sup>, Georgiev M.<sup>1</sup>, Hakenberg O.<sup>1</sup>, Manseck A.<sup>1</sup>, Wirth M.<sup>1</sup>

<sup>1</sup>Technical University, Urology, Dresden, Germany, <sup>2</sup>Technical University, Anaesthesiology, Dresden, Germany

**INTRODUCTION & OBJECTIVES:** Postoperative ileus is a common early complication and the major cause of prolonged hospital stay in patients undergoing radical cystectomy. Underlying pathogenetic factors have not been reported in radical cystectomy patients so far. Comorbidity and the type and extent of surgery have been suspected to implicate postoperative ileus. In contrast to intravenous opioid analgesia the impact of postoperative epidural analgesia on early postoperative gastrointestinal recovery has been described in major abdominal surgery. The purpose of the underlying study was to identify factors contributing to the development of postoperative ileus in patients undergoing radical cystectomy by means of a multivariate analysis with particular regard to co-morbidity and postoperative analgesia.

**MATERIAL & METHODS:** After establishing a perioperative care pathway in 1993 the records of 321 consecutive patients undergoing radical cystectomy for bladder cancer between 1994 and 2001 were reviewed regarding incidence and duration of postoperative ileus. Postoperative ileus was defined as absence of bowel sounds and defecation for more than 4 postoperative days. Multivariate analysis was performed on the following factors: American Society of Anaesthesiologists Physical state (ASA), age, gender, duration of surgery, type of urinary diversion, transfusion requirement, postoperative complications, methods of applied pain therapy.

**RESULTS:** The records of 314 patients could be analyzed. Ileus appeared in 15 patients (4.8%). Age, gender, type of urinary diversion as well as prior abdominal surgery did not significantly contribute to the calculated multivariate model of postoperative ileus, while ASA score, body mass index and the type of postoperative analgesia did (table;  $r=0.386$ ). Postoperative ileus was also associated with the occurrence of surgical complications.

Risk factor	Standardized Beta-coefficient	p-value
ASA >2	- 0.172	0.049
Epidural analgesia	0.227	0.008
Body mass index	0.188	0.026
Duration of surgery	- 0.064	0.501
Transfusion requirement	- 0.084	0.381
Surgical complications	- 0.177	0.038

**CONCLUSIONS:** These results indicate that postoperative ileus is related to increased co-morbidity (ASA>2) and body mass index as well as postoperative surgical complications. In this setting, however, the type of pain relief administered (epidural analgesia or intravenous opioid analgesia) was the strongest predictor for the occurrence and duration of postoperative gastrointestinal dysfunction.