Urinary Retention In Early Foley Removal After Colorectal Surgery

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Introduction

- After colorectal surgery, urinary tract infection (UTI) and urinary retention increase patient morbidity, length of stay and cost
- To decrease UTI, we instituted a protocol of foley catheter removal on post-op day 2
- To decrease urinary retention in males, Tamsulosin 0.4 mg was given 3 days prior to surgery until discharge

Purpose

- To determine incidence of urinary retention and UTI
- To identify potential risk factors for urinary retention

Method

- Retrospective cohort study at single academic centre
- Inclusion criteria:
 - Consecutive elective colorectal cases in male patients 50+ years old from Jan 2015 to Feb 2017
- Exclusion criteria:
 - Baseline alpha blockers
 - Prior prostate surgery
 - Tumour extension or intra-operative injury to bladder, prostate or urethra
 - Prolonged foley for intensive care purposes
- Univariate analysis followed by multivariate logistic regression to determine potential risk factors

Table 1. Patient Demographics

Demographics	Patients (n=118)
Age (years), mean ($\pm$ SD)	66 (9.42)
Lesion location, n (% left sided)	93 (78.81)
MIS, n (%)	89 (75.42)
OR duration (minutes), mean ($\pm$ SD)	171.06 (64.31)
LOS (days), mean ($\pm$ SD)	6.84 (5.74)
Intra-op fluid balance (mL), mean ($\pm$ SD)	1462.77 (652.00)
POD foley removal, mean ($\pm$ SD)	2.14 (1.10)
Neoadjuvant chemoradiation, n (%)	21 (17.80)
Prior voiding difficulty, n (%)	17 (14.41)
Epidural, n (%)	37 (31.36)
Patient controlled analgesia, n (%)	99 (85.34)
Ileus, n (%)	25 (21.19)
Anastomotic leak, n (%)	10 (8.47)

Results

- 118 patients included in the analysis
 - 62 patients without & 56 patients with prophylactic Tamsulosin
- UTI rate was 5.13%
- Urinary retention rate was 12.71%

Conclusion

- Urinary retention was associated with operative duration & ileus, which could be explained by more difficult cases
- Urinary retention was not associated with rectal lesions or prophylactic Tamsulosin
- Small sample size warrants further investigation

Table 2. Regression analysis of potential risk factors for retention.

Potential risk factor	Unadjusted OR [95% CI]	p value	Adjusted OR [95% CI]	p value
Age	1.00 [0.94, 1.06]	1.00	--	--
Lesion location Left vs. Right	2.76 [0.34, 22.55]	0.34	--	--
Operative technique Open vs. MIS MIS converted to Open vs. MIS	-- 1.46 [0.28, 7.67]	0.96 0.65	-- --	-- --
OR duration	1.02 [1.01, 1.03]	<0.01	1.02 [1.01,1.03]	<0.01
Intra-op fluid	1.00 [1.00, 1.00]	0.06	--	--
Prophylactic Tamsulosin	1.31 [0.44, 3.88]	0.63	--	--
ASA score	2.11 [0.92, 4.84]	0.08	--	--
Neoadjuvant chemoradiation	1.84 [0.52, 6.47]	0.34	--	--
Prior voiding difficulty	0.90 [0.19, 4.41]	0.90	--	--
Epidural	2.13 [0.71, 6.40]	0.18	--	--
Patient-controlled analgesia	0.37 [0.10, 1.34]	0.13	--	--
Ileus	5.78 [1.85, 18.08]	<0.01	4.96 [1.45, 16.94]	<0.01
Anastomotic Leak	3.43 [0.78, 15.06]	0.10	--	--