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## Stent vs. Stent-less Ileal Conduits After Radical Cystectomies: Is There Difference In Early Postoperative Outcomes?

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# Stent vs Stent-less Ileal Conduits After Radical Cystectomies: Is There Difference In Early Postoperative Outcomes?

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## Abstract

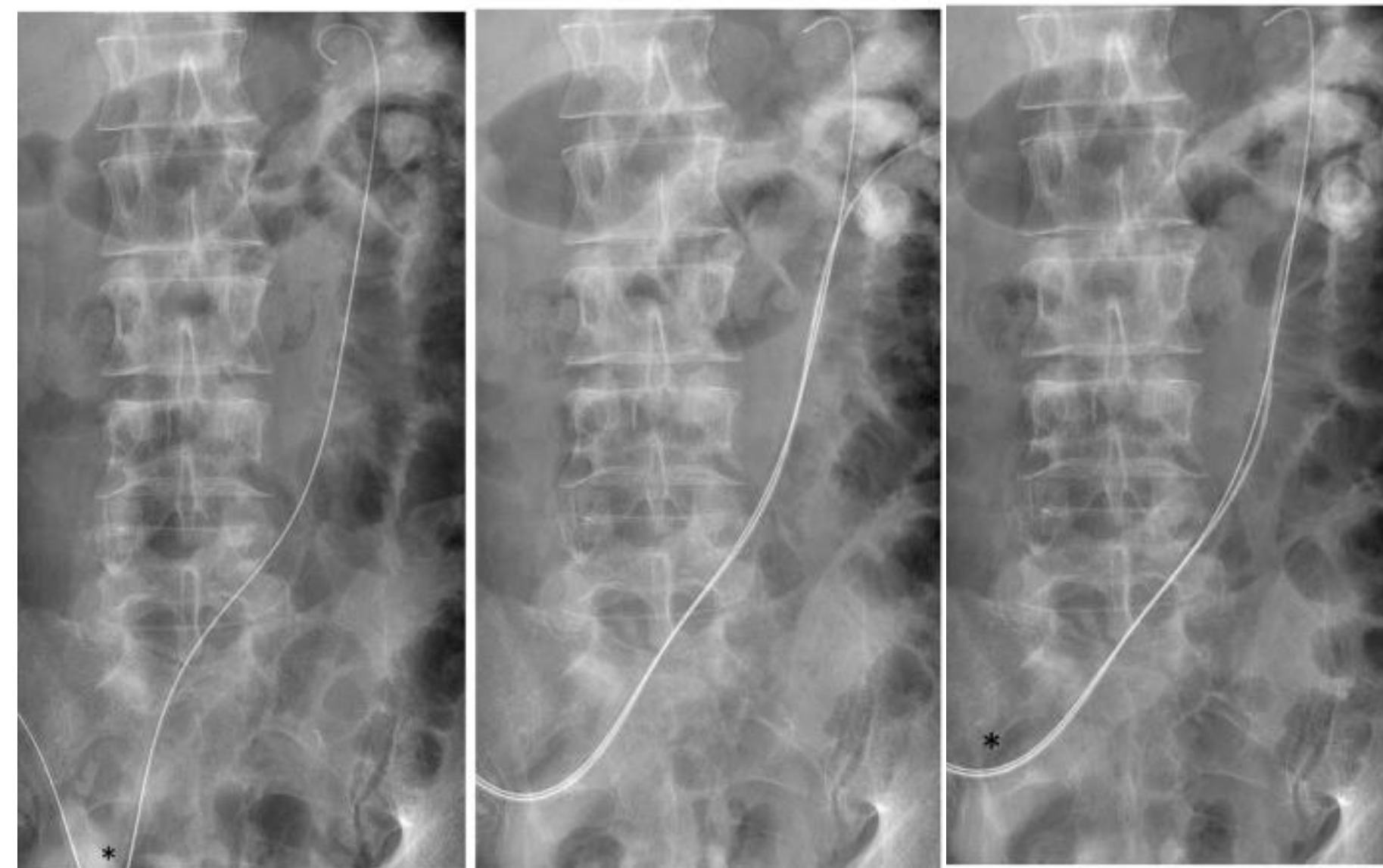
Placing ureteral stents at the ureteroileal anastomosis for radical cystectomy with ileal conduit (RCIC) diversion has long been common practice, which has recently been called into question. In this study, we aim to investigate the difference in 30-day outcomes between patients who did and did not receive ureteral stents after RCIC.

## Introduction

- The use of ureteral stents for radical cystectomy with ileal conduit (RCIC) was first used in the 1980s to provide mechanical support for the ureteroileal anastomosis.<sup>1,2</sup>
- Despite the widespread use, stents have been documented to cause increased complications.<sup>3,4</sup>
- Objective:** Investigate the difference in risk factors, 30-day outcomes, and complications between patients undergoing RCIC with and without stent placement. We hypothesize that the outcomes and complications between both cohorts will not be significantly different

## Methods

- A retrospective review of RCICs between 2019-2020 recorded in NSQIP and cystectomy-targeted database was performed.
- Primary outcomes included rates of UTIs, AKIs, renal failure requiring dialysis, anastomotic leaks, ureteral obstructions, ureteral fistula formation, and 30-day reoperation and readmissions.
- Outcomes were measured using Pearson's chi-square.



**Figure 1 (Left) to Figure 3 (Right):** A guidewire was inserted into the renal collecting system via the ileal conduit. Following insertion of a wide-bore sheath, a second stiff wire was inserted for stability. Lastly, a 28-cm ureteric stent is advanced while the wires act as a scaffold.<sup>5</sup>

	SIC (n = 3419)	USIC (n = 446)	p-value
<b>Minor Complications</b>	1336 (39.1%)	172 (38.6%)	0.8353
Superficial SSI	169 (4.9%)	17 (3.8%)	0.2938
Pneumonia	96 (2.8%)	10 (2.2%)	0.4915
Urinary Tract Infection (UTIs)	<b>243 (7.1%)</b>	<b>41 (9.2%)</b>	<b>0.0543</b>
Bleeding Requiring Transfusion	942 (27.6%)	110 (24.7%)	0.1974
Progressive Renal Insufficiency	42 (1.2%)	8 (1.8%)	0.3204
C. Diff Infection	74 (2.2%)	9 (2.0%)	0.8410
<b>Major Complications</b>	987 (28.9%)	141 (31.6%)	0.2302
Return to OR	161 (4.7%)	23 (5.2%)	0.6760
30-day Readmission	681 (19.9%)	89 (20.0%)	0.9853
30-day Mortality	60 (1.8%)	11 (2.5%)	0.2926
<b>Urology Specific Complications</b>	740 (25.1%)	502 (26.6%)	0.2554
Anastomotic Leak	86 (2.5%)	16 (3.6%)	0.1827
Lymphocele/Lymphatic Leak	174 (5.1%)	29 (6.5%)	0.2083
Prolonged NGT Use	<b>609 (17.8%)</b>	<b>60 (13.5%)</b>	<b>0.0221</b>
Rectal Injury	55 (1.6%)	5 (1.1%)	0.4334
Urinary Leak/Fistula	106 (3.1%)	16 (3.6%)	0.5800
Ureteral Obstruction	<b>118 (3.5%)</b>	<b>8 (1.8%)</b>	<b>0.0453</b>
<b>Operative time (min)</b>	<b>327.2 ± 109.6</b>	<b>294.6 ± 116.6</b>	<b>&lt;0.0001</b>
<b>Hospital Length of Stay (days)</b>	7.5 ± 4.6	7.8 ± 6.0	0.3356

**Table 1:** Univariate Analysis of 30-day Outcomes and Complications from Patients who Received Stented (SIC) Ileal Conduits and Unstented Ileal Conduits (USIC)

## Results

- No differences were seen in demographics, comorbidities, or operative parameters. More USIC patients were preoperatively on dialysis (4.9% vs 0.5%, p<0.001), and more underwent robotic-assisted vs open RCs compared to the SIC group (33% vs 21%, p<0.001).
- Increased rates of ureteral obstructions (118 vs 8, p=0.0453), UTIs (243 vs 41 p=0.0543), operative time (327.2 ± 109.6 min vs 294.6 ± 116.6 min p=<0.0001), and a prolonged NGT (609 (17.8%) vs 60 (13.5%) p=0.0221) were noted in the SIC cohort compared to the USIC cohort.
- No other significant differences in 30-day minor or major complications, urologic complications such as leaks or fistulas, and 30-day readmissions or mortality were noted between cohorts.

## Conclusions

- This study represents the largest multi-institutional analysis comparing outcomes between traditionally stented and stent-less RCICs
- A higher incidences of complications were noted in stented ileal conduits compared to stent-less ileal conduits indicating stents may not play as significant of a role in preventing early complications as previously thought

## References

- Le Duc A, Caley M, Teillac P. An original antireflux ureteroleal implantation technique: Long-term followup. *J Urol.* 1987;137(6). doi:10.1016/S0022-5347(17)44433-8
- Regan JB, Barrett DM. Stented versus nonstented ureteroleal anastomoses: Is there a difference with regard to leak and stricture? *J Urol.* 1985;134(6). doi:10.1016/S0022-5347(17)47644-0
- Peng YL, Ning K, Wu ZS, et al. Ureteral stents cannot decrease the incidence of ureteroleal anastomotic stricture and leakage: A systematic review and meta-analysis. *Int J Surg.* 2021;93. doi:10.1016/j.ijsu.2021.106058
- Mullins JK, Guzzo TJ, Ball MW, et al. Ureteral stents placed at the time of urinary diversion decreases postoperative morbidity. *Urol Int.* 2012;88(1). doi:10.1159/000335212
- Charles Topping, James H. Briggs, Mark W. Little, Mark J. Bratby, Jane Phillips-Hughes, Jeremy P. Crew, Phil Boardman. Retrograde Transileal Conduit Stent Placement for Obstructed Uropathy—Success of Primary and Exchange Stent Placement. *Journal of Vascular and Interventional Radiology.* 2014. https://doi.org/10.1016/j.jvir.2014.02.013.