

MP82-20: URETERAL STENT PLACEMENT VS NEPHROSTOMY TUBE PLACEMENT PRIOR TO RADICAL CLINIC CYSTECTOMY DOES NOT INCREASE POST-CYSTECTOMY UPPER TRACT UROTHELIAL CARCINOMA



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Introduction & Objectives

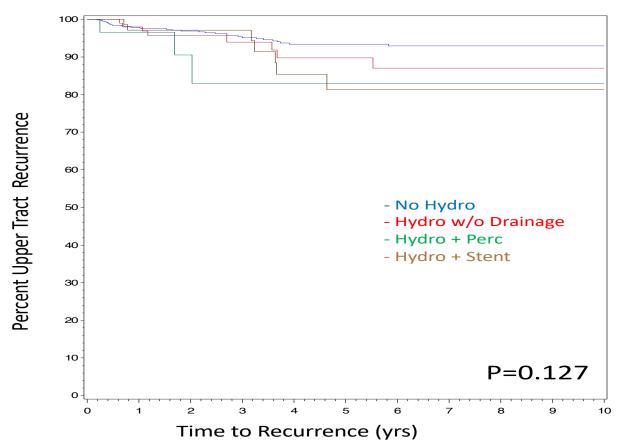
- Patients with hydronephrosis prior to radical cystectomy for urothelial carcinoma are variably treated with observation, ureteral stent, or nephrostomy tube.
- A recent study found that retrograde ureteral stent drainage in this setting was associated with a higher rate of upper tract urothelial carcinoma (UTUC) recurrence compared to nephrostomy tube drainage.
- We analyze our institutional results to corroborate these findings to evaluate if a management change is warranted.

Methods

- Population: N=1,049
- Radical Cystectomy (2000-2015)
- **Urothelial Carcinoma of the bladder**
- No history of UTUC
- **Cohorts:**
- 1. no hydronephrosis (75%, N=787)
- 2. hydronephrosis without upper tract drainage (13%, N=132)
- 3. hydronephrosis s/p nephrostomy tube (3%, N=36)
- 4. hydronephrosis treated with ureteral stent (9%, N=94)
- **Outcomes:**
 - **UTUC** incidence post-cystectomy
- **Ureteroenteric Anastomotic** leak/stricture
- **Post-cystectomy Pyelonephritis**
- **Analysis: Descriptive statistics, Univariable / Multivariable Regression**

Results: Baseline Characteristics and UTUC rates

Table 1: Baseline Characteristics						
	No Hydro (N=787)	Hydro No Drainage (N=132)	Hydro s/p Neph tube (N=36)	Hydro s/p Ureteral stent (N=94)	Total (N=1049)	p value
Age (median)	69.3	69.5	68.8	69.6	69.4	0.88
Sex, male	657 (83.6%)	111 (84.1%)	26 (72.2%)	79 (84.0%)	873 (83.3%)	0.35
pTstage						< 0.01
Та	21 (2.7%)	5 (3.8%)	0 (0.0%)	1 (1.1%)	27 (2.6%)	
Tis/Cis	91 (11.6%)	10 (7.6%)	0 (0.0%)	4 (4.3%)	105 (10.0%)	
T1	124 (15.8%)	15 (11.4%)	0 (0.0%)	10 (10.6%)	149 (14.2%)	
T2	212 (26.9%)	19 (14.4%)	6 (16.7%)	23 (24.5%)	260 (24.8%)	
T3	279 (35.5%)	63 (47.7%)	20 (55.6%)	42 (44.7%)	404 (38.5%)	
T4	55 (7.0%)	20 (15.2%)	10 (27.8%)	14 (15.0%)	99 (9.4%)	
Nodal Stage						<0.01
NX	32 (4.1%)	9 (6.8%)	3 (8.3%)	8 (8.5%)	52 (5.0%)	
N0	584 (74.2%)	84 (63.6%)	19 (52.8%)	51 (54.3%)	738 (70.4%)	
N1	63 (8.0%)	15 (11.4%)	4 (11.1%)	12 (12.8%)	94 (9.0%)	
N2	61 (7.8%)	15 (11.4%)	4 (11.1%)	13 (13.8%)	93 (8.9%)	
N3	47 (6.0%)	9 (6.8%)	6 (16.7%)	10 (10.6%)	72 (6.9%)	
Any CIS						<0.01
Yes	425 (54.0%)	62 (47.0%)	10 (27.8%)	32 (34.0%)	529 (50.4%)	
Conduit	556 (70.6%)	100 (75.8%)	31 (86.1%)	75 (79.8%)	762 (72.6%)	0.04
Ureteral Margin	34 (4.3%)	11 (8.3%)	1 (2.8%)	4 (4.3%)	50 (4.8%)	0.22
Neoadjuvant Chemotherapy	264 (33.5%)	31 (23.5%)	3 (8.33%)	28 (29.8%)	326 (31.1%)	<0.01
Median Follow-up (Years)	4.3	6.1	0.8	4.3	4.3	0.14
N (alive)	360	29	9	35	444	



Multivariable* Cox Regression: UTUC rates					
Group	5-year UTUC rate	Hazard Ratio	p-value		
No Hydronephrosis	6.6%	Reference	Reference		
Hydro + No Drainage	10.2%	1.31 (1.08-1.58)	p=0.01		
Hydro + Perc tube	17%	1.49 (1.06-2.09)	p=0.02		
Hydro + Ureteral stent	18.7%	0.90 (1.06-2.09)	p=0.33		

*adjusting for: age, comorbidities, pT stage, pN stage, neoadjuvant chemotherapy, intravesical chemo, CIS, LVI, margins, and year of surgery

Results: Complications

Multivariable* Regress.: Anastomotic Stricture/Leak					
Group	5-year rate (p=0.918)	Hazard Ratio	p-value		
No Hydronephrosis	8.5%	Reference	Reference		
Hydro + No Drainage	9.2%	1.87 (0.85-4.15)	p=0.12		
Hydro + Perc tube	8.3%	1.53 (0.31-7.52)	p=0.60		
Hydro + Ureteral stent	10.6%	1.65 (0.61-4.41)	p=0.32		

Multivariable* Regression: Pyelonephritis					
Group	1-year rate (p=0.778)	Odds Ratio	p-value		
No Hydronephrosis	14.5%	Reference	Reference		
Hydro + No Drainage	14.4%	1.12 (0.59-2.15)	p=0.73		
Hydro + Perc tube	8.3%	1.18 (0.35-4.01)	p=0.79		
Hydro + Ureteral stent	14.9%	1.33 (0.66-2.71)	p=0.43		

*adjusting for: age, comorbidities, pT stage, pN stage, neoadjuvant chemotherapy, intravesical chemo, CIS, LVI, margins, and year of surgery

Conclusions

- After accounting for hydronephrosis, ureteral stent placement for managing hydronephrosis did not increase the risk of UTUC after cystectomy.
- The higher rate of UTUC seen with nephrostomy tube placement likely reflects the higher underlying degree of obstruction from the primary tumor and other unmeasured confounders.
- Importantly, the method of upper tract drainage did not impact the incidence of ureteroenteric anastomotic complications or upper tract urinary infections.
- Thus, our data does not support the preferential use of either percutaneous nephrostomy tube placement or ureteral stent placement for hydronephrosis prior to radical cystectomy.