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DETERMINANTS OF RECURRENT URINARY TRACT INFECTION IN SPINAL CORD INJURY PATIENTS

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Disclosures

- I have no special interests to disclose.

Objective

- Urinary Tract Infection (UTI) is reported to be the leading cause of morbidity in patients with spinal cord injury (SCI).
- Assess which demographic, clinical and physiologic variables are possible risk factors for recurrent UTIs (rUTI) in SCI patients.

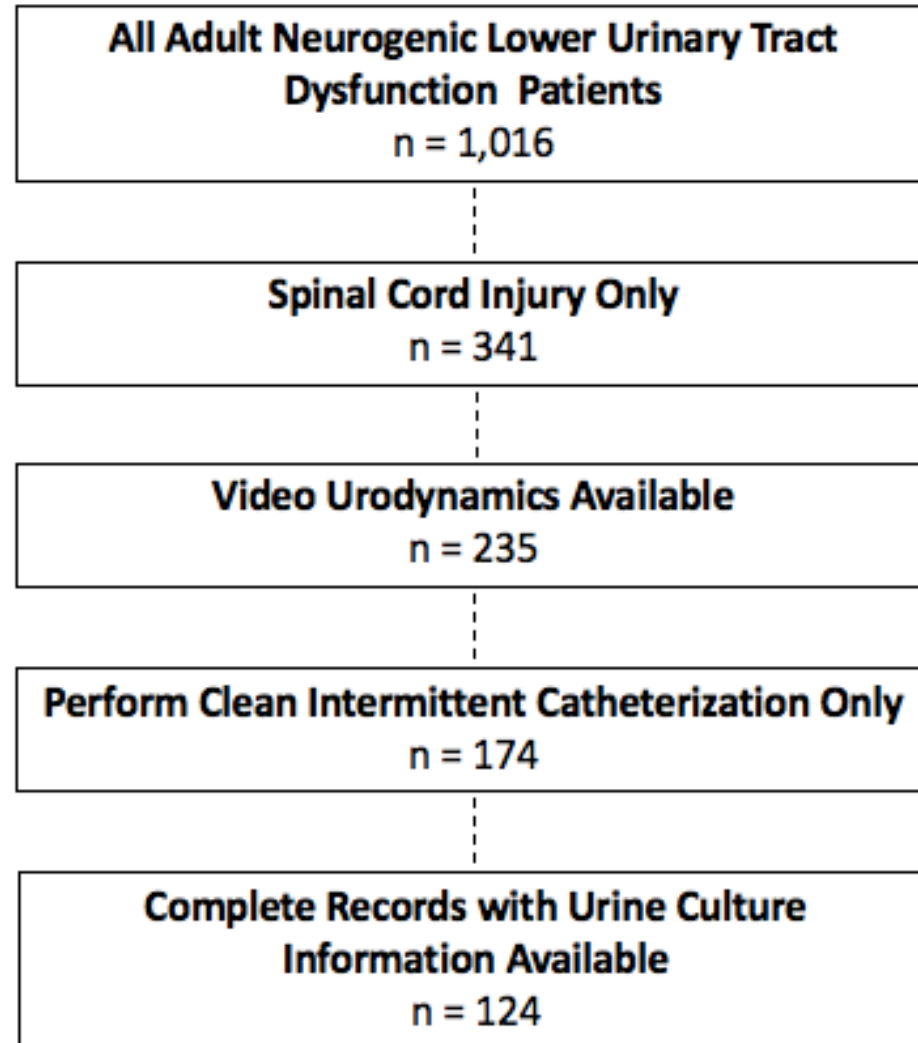
Methods

- Retrospectively reviewed patients upon their presentation to our Urology department between 2007-2017.
 - Patient Demographics, Clinical variables, UDS properties, Urine cultures
- Defined recurrent UTIs as ≥ 3 Urine Culture-positive infections in the year leading up to presentation.

Methods

- VUDS was performed in the supine position at ≤ 30 mL/min with low threshold to lower to 10 mL/min.
- VUDS performed in compliance with ICS standards.

Exclusion



Demographics

		Recurrent UTIs n=30	Control n=94	P value
Age	Mean	34.0	38.4	0.142
Sex	Female	23.3%	10.6%	0.123
	Male	76.7%	86.3%	
Race	Black	43.3%	22.3%	0.033
	Other	13.3%	8.5%	
	White	43.3%	69.1%	
SCI Level of Injury	Cervical	33.3%	34.0%	1.000
	Thoracic	60%	57.4%	
	Lumbosacral	6.7%	8.5%	
Years Since SCI	Mean	3.1	5.6	0.018

UDS Variables

		Recurrent UTIs n=30	Control n=94	P value
DO Present	Yes	66.7%	72.3%	0.551
	No	33.3%	27.7%	
Volume at First DO	Median	225.0	275.0	0.287
Max Pdet during DO	Median	55.0	50.0	0.240
Capacity	Median	395.0	486.5	0.424
End Fill Pdet	Median	7.5	7.5	0.699
Compliance	Median	50.0	42.4	0.641

Comparison of Groups

- In comparing those with rUTI and those without:
 - African Americans comprised a greater proportion (43.3% vs 22.3%) of the rUTI group ($p=0.033$).
 - Mean time since injury was shorter (3.1 vs 5.6 years) for those with rUTI ($p=0.018$).
- UDS variables were not significantly different between groups.

Stepwise Logistic Regression

- On regression, race other than white and female gender were adjusted determinants of rUTI.
 - African Americans 5.16x more likely to have rUTI than white (p=0.002).
 - Females 4.96x more likely to have rUTI than males (p=0.011).
- Greater time since injury was protective.
 - Every year since injury 0.91x as likely to have rUTI (p=0.036).
- UDS variables were not significant risk factors on regression analysis.

		Odds Ratio	P value
Sex	Male	Reference	
	Female	4.96	0.011
Race	White	Reference	
	Black	5.16	0.002
	Other	3.91	0.064†
Years Since SCI		0.91	0.036

Conclusions

- Demographic factors such as race other than white and female gender are risk factors for rUTI in this population while time since injury appears protective.
- UDS variables are not significant risk factors for rUTI in SCI patients managed with CIC.

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