PATHOGEN-SPECIFIC URETHRITIS SIGNS AND SYMPTOMS IN MEN WITH NONGONOCOCCAL URETHRITIS (NGU)

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BACKGROUND

- Syndromic management is the standard approach to NGU treatment as no point-of-care test exists.
- Limitations of syndromic management are that it relies on non-specific NGU signs and symptoms and may result in ineffective empiric treatment.
- Empiric NGU treatment is ineffective against:
 - Trichomonas vaginalis* (TV)
 - Macrolide-resistant *M. genitalium* (MG)
- Pathogen-specific urethritis signs and/or symptoms are needed to improve syndromic management accuracy and empiric treatment.
- We hypothesized that pathogen-specific signs/symptoms may be identified by comparing clinical data from men with single-pathogen NGU.

METHODS

- Men with NGU were recruited from the Bell Flower STD Clinic (BFC) in Indianapolis, IN from August 4, 2016 to January 26, 2018.
- Criteria to diagnose NGU was all 3 of the following:
 - Signs and/or symptoms of urethritis.
 - Urethral Gram-stain with >5 PMN/HPF seen.
 - No Gram-negative intracellular diplococci seen.
- Demographic, sexual and clinical information was obtained.
- Men were asked about urethral symptoms:
 - Discharge
 - Dysuria
 - Tingling/burning
 - Meatal erythema
 - Itching
 - Presence of lesions/other symptoms
- A first-void urine was obtained and tested by NAAT for the presence of:
 - Neisseria gonorrhoeae* (NG)
 - Chlamydia trachomatis* (CT)
 - MG
 - TV
 - Ureaplasma urealyticum* (UU)
- Idiopathic urethritis (IU) was defined in men who were NAAT-negative for NG, CT, MG, TV, and UU.
- Significance was evaluated using Chi-square and defined as $P < 0.05$ in groups with $N \geq 5$.

RESULTS

Participant characteristic	NGU Cases (N = 100)	Controls (N = 90)	P-value
Age, median (range)	28 (18 – 54)	29 (19 – 68)	0.43
Race, n (%)			0.0001
African American	64 (64%)	37 (42%)	
Caucasian	20 (20%)	44 (49%)	
Other	16 (16%)	8 (9%)	
Ethnicity			0.908
Hispanic	10 (11%)	9 (10%)	
Non-Hispanic	83 (89%)	79 (90%)	
Symptoms (any)	100 (100%)	0	–
Discharge	94 (94%)	0	
Dysuria	27 (27%)	0	
Burning/tingling	37 (37%)	0	
Itching	9 (9%)	0	
Meatal erythema	1 (1%)	0	
Other/Lesions	3 (3%)	6 (8%)	
Physical Exam			–
Circumcised	89 (89%)	69 (92%)	
Discharge present	99 (99%)	0	
Meatal erythema	4 (4%)	0	
Pathogens			
NG	excluded	excluded	
CT only	34 (34%)	1 (1%)	< 0.0001
MG only	21 (21%)	5 (6%)	0.0234
TV only	3 (3%)	1 (1%)	0.6231
UU only	8 (8%)	16 (18%)	0.0504
IU/Negative	24 (24%)	65 (72%)	–
Mixed infection	10 (10%)	2 (2%)	0.0358

CONCLUSIONS

- CT and MG comprise >50% of NGU; IU 25%.
- Tingling/burning is highly specific for CT NGU.
- No other pathogen-specific signs or symptoms of NGU were identified.

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