

Table 1. Clinical History and Laboratory Results at Presentation for Patients with Disseminated Gonococcal Infection

Factor	Patient 1	Patient 2	Patient 3
Age (years)	62	46	69
Sex	Male	Male	Male
Ethnicity	African-American	African-American	African-American
Co-Morbidities	Hypertension, Henoch-Schoenlein purpura	Type 2 diabetes	Multiple sclerosis
Joint Involvement	Yes	Yes	Yes
Skin Manifestations	No	Yes	Yes
HIV Status	Negative	Negative	Negative
Site of Positive <i>N. gonorrhoeae</i> Culture	Synovial fluid	Synovial fluid	Blood
Orogenital NAAT Results	Negative	Positive (pharynx)	Negative
WBC Count (10 <sup>3</sup> /μL)	14.3	24.8	24.2
ESR (mm/hr)	102	130	-
CRP (mg/dL)	18.9	>19	-
Synovial Fluid WBC Count (10 <sup>3</sup> /μL)	273,440	95,400	48,700

HIV, human immunodeficiency virus  
 NAAT, nucleic acid amplification test  
 WBC, white blood cell  
 ESR, erythrocyte sedimentation rate  
 CRP, C-reactive protein

**Conclusion:** This cluster of DGI cases was unusual given the recent rarity at this VAMC, the age of the patients, and lack of overt risk factors. In Virginia, DGI is reported to the health department no differently than uncomplicated infections, so the actual rate of DGI regionally is unknown. One isolate was preserved and sent to the Centers for Disease Control and Prevention for deidentified whole genome sequencing. More refined reporting is necessary to improve understanding of local gonorrhea epidemiology, as well as coupling with additional methodologies such as serotyping or whole genome sequencing. Clinicians should be aware of the possibility of DGI, even in older patients without classic risk factors.

**Disclosures.** All Authors: No reported disclosures

**1531. Antibiotic Selection for *Neisseria gonorrhoeae* among Penicillin Allergic Patients in the Emergency Department**

Matthew J. McGuinness, n/a<sup>1</sup>; Jonathan McCoy, MD<sup>2</sup>; Tanaya Bhowmick, MD<sup>1</sup>; <sup>1</sup>Rutgers Robert Wood Johnson Medical School, Plainsboro, New Jersey; <sup>2</sup>Rutgers-RWJMS, New Brunswick, New Jersey

**Session:** P-69. Sexually Transmitted Infections

**Background.** While penicillin (PCN) allergies are commonly reported, their cross-reactivity with beta-lactam antibiotics is minimal. First line treatment of gonorrheal infections includes a cephalosporin (CPH). In an emergency department (ED) environment, physicians must consider potential allergies when selecting antibiotics for a patient with symptoms concerning for sexually transmitted infection (STI).

**Methods.** A retrospective chart review on adult patients with symptoms concerning for STI presenting to an urban ED from January 2014 through June 2019 was performed. Chart discovery was performed using search terms of "STI", "STD", "urethritis", "vaginitis", and "gonorrhea". Information abstracted included patient symptoms, type of care provider, and antibiotics prescribed or administered in the ED. The primary outcome was prevalence of allergy to PCN and CPH in patients evaluated for STI symptoms and secondary outcomes included prescribed antibiotic treatments. Chi-square and Fischer-exact tests were utilized to examine for statistical significance, with p values < 0.05 as statistically significant.

**Results.** A total of 603 patients met the inclusion criteria, of which 31 reported allergies to PCN, and another 3 reported allergies to CPH. Patients reporting PCN allergy were found to be less likely to receive a CPH antibiotic (p=0.0035). Patients reporting a non-anaphylactic allergy to PCN received a CPH at a rate of 92.3%. Attending physicians in particular were less likely to prescribe a CPH antibiotic to a patient reporting allergy compared with both resident physicians and PAs (p=0.00019). Patients reporting a PCN allergy were more likely to receive alternative antibiotics beyond CPH or azithromycin (p=0.046); the most frequently given antibiotics were metronidazole, doxycycline, and levofloxacin.

Demographic Data

Characteristic	Allergy Reported	No Allergy Reported
Total #	34	569
Age (years), mean (range)	31.3 (21-59)	30.9 (21-66)
Male sex, no. (%)	30 (88.2)	489 (85.9)

- Penicillin or cephalosporin allergy reported in around 5.6% of patients overall with STI symptoms

Antibiotic Prescriptions by Type of Penicillin Allergy

	Anaphylactic Allergy	Non-Anaphylactic Allergy	Unknown Allergy	Cephalosporin Allergy	No Allergy
Total #	2	13	16	3	569
Any antibiotic given (%)	2 (100)	13 (100)	15 (93.8)	3 (100)	522 (91.7)
Cephalosporin given (%)	0	12 (92.3)	9 (56.3)*	1 (33.3)	486 (85.4)
Azithromycin given (%)	1 (50.0)	13 (100)	11 (68.8)	1 (33.3)	450 (79.1)
Other antibiotics given (%)	0	6 (46.2)	9 (56.3)	2 (66.7)	175 (30.8)
G/C Probe Testing (%)	2 (100)	11 (84.6)	12 (75.0)	3 (100)	464 (83.3)

- \* Significant difference by Fisher's Exact test between non-anaphylactic and unknown allergies (p = 0.0443)

Antibiotic Prescriptions for Penicillin Allergy vs. No Allergy

	Penicillin Allergy Reported (n=31)	No Allergy Reported (n=561)	p-value
Any Antibiotics given (%)	30 (96.8)	522 (93.0)	
Cephalosporin given (%)	21 (67.7)	486 (86.6)	p = 0.0035
Azithromycin given (%)	26 (83.9)	450 (80.2)	
Other antibiotics given (%)	15 (48.4)	175 (31.2)	p = 0.046
# Tested for G/C (%)	30 (80.6)	474 (84.5)	
Azithromycin given without a cephalosporin (%)	6 (19.4)	3 (0.527)	p < 0.00001
Azithromycin ONLY (%)	3 (9.68)	3 (0.527)	p = 0.0023
Azithromycin given WITH a non-cephalosporin antibiotic (%)	3 (9.68)	0	p = 0.0001
# Patients returning to ED within 1 month for same symptoms	3 (9.68)	50 (8.91)	

**Conclusion.** Patients with PCN allergies represent a recurring challenge for ED physicians when faced with antibiotic selection for STI symptoms concerning for gonorrheal infection. Those with PCN allergies are significantly less likely to receive a CPH antibiotic, though these remain the only universal treatment for gonorrheal infections. These findings highlight the significant need for further physician education on allergies and antibiotic selection.

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**1532. Demographics and Population Epidemiology of *Mycoplasma genitalium* infection: Correlation to Co-Infection and prior STI history**

Josh Kostera, PhD<sup>1</sup>; Jose Santiago, PhD<sup>1</sup>; <sup>1</sup>Abbott Laboratories, Des Plaines, Illinois

**Session:** P-69. Sexually Transmitted Infections

**Background.** Despite reports in the past few years that Americans are having less sex, the US Centers for Disease Control and Prevention (CDC) recently reported in 2019 that sexually transmitted infection (STI) cases are at an all-time high in the United States. The CDC report included statistics on confirmed cases of Chlamydia trachomatis and *Neisseria gonorrhoeae*, but did not include data for *Trichomonas vaginalis* and *Mycoplasma genitalium*. Although *Trichomonas vaginalis* and *Mycoplasma genitalium* are generally recognized agents responsible for STIs, there is limited prevalence data in the United States.

**Methods.** Herein we present STI prevalence and socio-demographic epidemiological data associated with patients enrolled in a multicenter STI study using the automated multiplex qualitative CE marked assay, Alinity m STI. The enrolled study population reflected a diverse number of participants with an approximately equal male to female ratio, prior STI history, single and married, education levels from primary to post-graduate, as well as different ethnicities.

**Results.** Participants in this study population who have previously been diagnosed with an STI had an overall *Mycoplasma genitalium* prevalence rate that was approximately double those who have not been previously diagnosed with an STI.