An Outbreak of Neisseria meningitidis Urethritis Among Men Seeking STD Care in Columbus, Ohio

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OBJECTIVE

In January 2015, the STD clinic at Columbus Public Health (Columbus, Ohio) began to detect an increase in Neisseria meningitidis (Nm) urethritis cases in male patients with Nm urethritis to culture-positive GC urethritis during the same time period.

METHODS

Study design and setting

• Combined medical chart data with data captured for CDC's Gonococcal Isolate Surveillance Project (GISP)
• Study period: January 1 to November 18, 2015

Ethical approval

• Ohio State University IRB approved this study

RESULTS

• Of 372 isolates with Gram-negative intracellular diplococci, 20% (n=75) were Nm and 95% (n=297) were GC.
• All Nm isolates were non-groupable, sequence type (ST) 11 and monophyletic within clonal complex (CC) 11.
• All Nm isolates had similar antigen typing results: PorA P1.5-1,10-8, PorB 2-2, and FetA F3-6, except one isolate which had a different PorB type (2-78).

METHODS

• Neisseria meningitidis (Nm) is a Gram-negative diplococcus.
• Neisseria meningitidis (Nm) urethritis is much less common than Neisseria gonorrhoeae (GC) urethritis.
• Both Nm and GC appear as Gram-negative intracellular diplococci on urethral Gram stain.

OBJECTIVE

• Describe clinical and molecular epidemiology of an outbreak of urethral Nm cases among male STD clinic patients in Columbus Ohio between January 1 and November 18, 2015.
• We compared cases of Nm urethritis to cases of men with culture-positive GC urethritis during the same time period.

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CONCLUSIONS

• 75 confirmed cases of urethritis due to a distinct Nm clade (non-groupable and ST-11 clonal complex) occurred in the Columbus STD clinic between January and 18 November 2015.
• Black, heterosexual, HIV-negative men comprise the majority of cases.
• Oral sex may be an underappreciated risk factor for transmission of Nm to the urethra.
• Transmission of Nm through vaginal or anal sex cannot be ruled out without additional investigation.

REFERENCES