Letters to the Editor

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Testing Options for the Detection of Gonorrhea and Chlamydia

Original Article: Diagnosis and Management of Gonococcal Infections

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TO THE EDITOR: This article mentions a very important idea: "Speculum examination may not be necessary to diagnose gonorrhea in women because of the comparable effectiveness of blind vaginal swabs." Additionally, a recent *American Family Physician* article on chlamydial infections states that "the accuracy of [nucleic acid amplification tests] on urine samples has been found to be nearly identical to that of samples obtained directly from the cervix or urethra."[1] However, Dr. Mayor and colleagues cite a study that concluded that the sensitivity of urine polymerase chain reaction (PCR) tests in women for the detection of *Neisseria gonorrhoeae* is too low to recommend routine testing.[2]

A recent study found that vulvovaginal samples were more sensitive than endocervical samples for detecting chlamydial infection in women with or without symptoms suggestive of a bacterial sexually transmitted infection.[3] A similar study concluded that vulvovaginal samples had the highest sensitivity for detecting gonorrheal infection.[4] These two well-designed studies suggest that self- or clinician-taken vulvovaginal samples outperform endocervical and urethral swabs for detecting sexually transmitted infections. Because vulvovaginal sampling is also less invasive and more convenient for patients, these studies have the potential to be practice-changing for family physicians.

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REFERENCES

1. Mishori R, McClaskey EL, Winklerprins VJ. *Chlamydia trachomatis* infections: screening, diagnosis, and management. *Am Fam Physician.* 2012;86(12):1127-1132.
2. Cook RL, Hutchison SL, Østergaard L, Braithwaite RS, Ness RB. Systematic review: noninvasive testing for *Chlamydia trachomatis* and *Neisseria gonorrhoeae*. *Ann Intern Med.* 2005;142(11):914-925.
3. Schoeman SA, Stewart CM, Booth RA, Smith SD, Wilcox MH, Wilson JD. Assessment of best single sample for finding chlamydia in women with and without symptoms: a diagnostic test study. *BMJ.* 2012;345:e8013.
4. Stewart CM, Schoeman SA, Booth RA, Smith SD, Wilcox MH, Wilson JD. Assessment of self taken swabs versus clinician taken swab cultures for diagnosing gonorrhea in women: single centre, diagnostic accuracy study. *BMJ.* 2012;345:e8107.

IN REPLY: We appreciate Dr. Plavchan's inquiry. Testing options for chlamydial and gonorrheal infections using laboratory-based techniques include culture, nucleic acid hybridization and transformation tests, enzyme immunoassay, direct fluorescent antibody testing, and nucleic acid amplification tests (NAATs).[1] Commercially available NAATs may use PCR, ligase chain reaction, strand displacement amplification, or transcription-mediated amplification.[1] The sensitivity of NAATs when using urine to detect *Chlamydia trachomatis* in women is similar to the sensitivity when using endocervical swabs.[1] However, as stated in our article, the sensitivity of NAATs (in particular, PCR) to detect *N. gonorrhoeae* in women is lower when using urine compared with endocervical specimens.[1]

One study collected urine and urethral or endocervical specimens from 344 men and 192 women attending two sexually transmitted disease clinics in Baltimore, Md.[2] Results showed that the sensitivity of PCR testing for gonorrhea using urine specimens was lower (78.3%) than that using endocervical specimens (100%).

A multicenter trial compared NAAT performance with culture in 2,192 matched endocervical and urine specimens obtained from women and 1,981 matched urethral and urine specimens obtained from men.[3]

NAAT using the urine specimens from women was less sensitive than culture from endocervical samples for detecting gonorrhea.

A systematic review of 29 studies (n = 20,536) investigated the sensitivity and specificity of NAATs for detecting chlamydia and gonorrhea in urine specimens.[4] For the four PCR studies reviewed, the pooled sensitivities and specificities for gonoccocal infections in urine samples from women were 55.6% (95% confidence interval [CI], 36.3% to 74.9%) and 98.7% (95% CI, 97.5% to 99.9%), respectively. However, for endocervical specimens, the pooled sensitivities and specificities were 94.2% (95% CI, 90.5% to 98.0%) and 99.2% (95% CI, 98.4% to 100%), respectively. The authors concluded that the sensitivity of PCR testing in women "is too low to recommend its routine use to test for gonorrhea in urine specimens."[4]

In 2005 and 2007, the U.S. Food and Drug Administration approved the use of vaginal swabs in testing for chlamydia and gonorrhea using only one type of NAAT: the transcription-mediated amplification test.[5]

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REFERENCES

1. Johnson RE, Newhall WJ, Papp JR, et al. Screening tests to detect *Chlamydia trachomatis* and *Neisseria gonorrhoeae* infections—2002. *MMWR Recomm Rep.* 2002;51(RR-15):1-38.
2. Crotchfelt KA, Welsh LE, DeBonville D, Rosenstraus M, Quinn TC. Detection of *Neisseria gonorrhoeae* and *Chlamydia trachomatis* in genitourinary specimens from men and women by a coamplification PCR assay. *J Clin Microbiol.* 1997;35(6):1536-1540.
3. Martin DH, Cammarata C, Van Der Pol B, et al. Multicenter evaluation of AMPLICOR and automated COBAS AMPLICOR CT/NG tests for *Neisseria gonorrhoeae. J Clin Microbiol.* 2000;38(10):3544-3549.
4. Cook RL, Hutchison SL, Østergaard L, Braithwaite RS, Ness RB. Systematic review: noninvasive testing for *Chlamydia trachomatis* and *Neisseria gonorrhoeae. Ann Intern Med.* 2005;142(11):914-925.
5. U.S. Food and Drug Administration. Vaccines, blood & biologics. Cleared nucleic acid tests (NAT) for *Chlamydia trachomatis* and *Neisseria gonorrhea.* http://www.fda.gov/BiologicsBloodVaccines/SafetyAvailability/TissueSafety/ucm095440.htm#ct. Accessed March 31, 2013.

Correction

Incorrect statement regarding gastrointestinal (GI) risks of aspirin/NSAID use. The Implementing AHRQ Effective Health Care Reviews, "Analgesics for Osteoarthritis" (March 1, 2013, p. 354), contained an error in the fourth sentence in the second paragraph of the Practice Pointers section (p. 354). The statement should have referred to concomitant use of aspirin and selective nonsteroidal anti-inflammatory drugs (NSAIDs), rather than aspirin and nonselective NSAIDs. The sentence should have read as follows: "Simultaneous use of aspirin attenuates the GI benefit of using a selective NSAID." The online version of this Implementing AHRQ Effective Health Care Reviews has been corrected. ■