Vulvovaginal Screening
What About Unindicated With Positive Test Results

Hope K. Haefner, MD
Professor
Michigan Medicine
Ann Arbor, Michigan, USA
Disclosures

• No financial relationships or conflict of interest to disclose
Many Unindicated Tests are Sent in Other Situations

• Unindicated preoperative testing in United States approached 12 billion dollars annually

• ER visits- 20 week viable pregnancy with HCG sent!
But What About the Vulva and the Vagina?

• Are unindicated tests sent?
• If so, then what are you supposed to do with that test result?
What About Herpes Testing?
Unindicated Herpes Testing

• Vulvovaginal HSV PCR on eroded lesion in vagina on a patient known to be HSV 2 positive
Unindicated Herpes Testing

• HSV serology IgM testing
What about any Serologic Screening for Genital Herpes?

Serologic Screening for Genital Herpes Infection: Recommendation Statement

Summary of Recommendation and Evidence
The USPSTF recommends against routine serologic screening for genital herpes simplex virus (HSV) infection in asymptomatic adolescents and adults, including those who are pregnant. D recommendation.

Rationale
IMPORTANCE
Genital herpes is a prevalent sexually transmitted infection (STI) in the United States; the Centers for Disease Control and Prevention (CDC) estimates that almost 1 in 6 persons aged 14 to 49 years have genital herpes.¹ Genital herpes infection is caused by 2 subtypes of HSV, HSV-1 and HSV-2. Unlike other infections for which screening is recommended, HSV infection may not have a long asymptomatic period during which screening, early identification, and treatment may alter its course. Antiviral medications may provide symptomatic relief from outbreaks; however, these medications do not

Table 1. Serologic Screening for Genital Herpes Infection: Clinical Summary of the USPSTF Recommendation

<table>
<thead>
<tr>
<th>Population</th>
<th>Asymptomatic adolescents and adults, including those who are pregnant</th>
</tr>
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<tbody>
<tr>
<td>Recommendation</td>
<td>Do not routinely screen for genital HSV infection. Grade: D</td>
</tr>
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</table>
What about any Serologic Screening for Genital Herpes?

The USPSTF piece in JAMA places routine screening for HSV (including pregnant women, category D)

No evidence for benefit and some evidence for harm

The USPSTF does not recommend serologic screening for genital HSV infection in asymptomatic persons
Personal Opinion

• Problem with numbers
  HSV 2 is estimated to infect more than 45 million individuals (15.3%) living in US ages 14-29 years

• Disappointing findings
  Antiviral therapy is inexpensive
  Antiviral therapy has very few known adverse effects
  May be a problem with compliance

• A way out of this
  Screening recommended for those with multiple sex partners
Unindicated Candida Cultures

• Asymptomatic patient
• Patient being tested after treatment
  - Do not retest shortly after treatment
Yeast Sensitivities

• Not cost effective for the majority of situations
Vaginal pH Testing with Wrong pH Range
Group B Streptococcus in the Nonpregnant Patient?

• GBS generally harmless commensal bacterium (colonizing the gastrointestinal and genitourinary tracts of up to 30% of healthy human adults) (asymptomatic carriers)

• Nonpregnant adults – GBS is increasingly recognized as a cause of bacteremia without a focus, sepsis, soft tissue infections, and other focal infections in nonpregnant adults
  - Diabetes mellitus, malignancy, HIV infection, and advanced hepatic and renal disease have been identified as risk factors for invasive GBS infection in population-based studies
• Skin and soft tissue infections account for 15 to 40 percent of all bacteremic episodes in population-based surveys

• The urinary tract is the source of 5 to 15 percent of invasive GBS isolates in population-based studies
Mycoplasma/Ureaplasma
Mycoplasma and Ureaplasma

• 17 species isolated from humans
• Major concern
  - *Mycoplasma pneumoniae* is a well-established pathogen; rarely isolated from healthy persons
  
  - *M. hominis, M. genitalium* and *Ureaplasma* species (genital mycoplasmal organisms) are found in genitourinary system
• *M hominis* has been isolated from cervicovaginal specimens in 21-53% of women who are asymptomatic and sexually active

• *Ureaplasma* species have been isolated from cervicovaginal specimens in 40-80% of women who are asymptomatic and sexually active
<table>
<thead>
<tr>
<th>Organism</th>
<th>Disease</th>
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<tbody>
<tr>
<td>M. Pneumoniae</td>
<td>Upper respiratory tract disease, tracheobronchitis, atypical pneumonia, (chronic asthma?)</td>
</tr>
<tr>
<td>M. hominis</td>
<td>Pelvic inflammatory disease?, preterm birth?</td>
</tr>
<tr>
<td>M. genitalium</td>
<td>NGU urethritis, cervicitis, pelvic inflammatory disease, preterm birth? (2 studies)</td>
</tr>
<tr>
<td>Ureaplasma species</td>
<td>NGU urethritis?, cervicitis, preterm birth?, pneumonia and chronic lung disease in premature infants?</td>
</tr>
</tbody>
</table>
Mycoplasmas

• Widely spread as commensals and pathogens throughout animals, insects, and plants
Human Mycoplasma

Mycoplasma species are small prokaryotes that lack a cell wall
  • Lack Gram stain reaction
  • Not susceptible to many commonly prescribed antibiotics - penicillins, cephalosporins, vancomycin, etc.

Usually reside extracellularly in the respiratory and urogenital tracts
  • Rarely penetrate the submucosa
M. genitalium

- First identified in 1980
- Low prevalence in the general population (1% to 3%)
  - Lower than C. trachomatis but higher than N. gonorrhrea
- No characteristic clinical syndrome - look very similar to Chlamydia

Transmission

- In humans, Mycoplasma and Ureaplasma species may be transmitted by direct contact
  - Genital-to-genital or oral-to-genital contact
  - Vertically from mother to offspring
  - Transplanted tissues

Pathogenic Role of M. Genitalium in Females

• Infections in women commonly asymptomatic
Mycoplasma species

• Generally felt not to cause vaginitis
• May proliferate in patients with bacterial vaginosis
Test M. Genitalium

- Slow growing organism; culture can take up to 6 months
- NAAT/PCR faster results
M. Genitalium Treatment

2015 CDC STD guidelines

• Azithromycin 1 g orally single dose preferred over Doxycycline 100 mg orally Bid for 7 days
• Emerging resistance
  Recurrence/no response
• Moxifloxacin 400 mg x 7, 10, or 14 days.

Ureaplasma

• Ureaplasma urealyticum & U parvum separate species
• PCR to separation
  • Now considered together as Ureaplasma species
  • U parvum is more common but U urealyticum probably more pathogenic


Courtesy of CDC/ Dr. Francis Forrester

http://phil.cdc.gov/phil/
Ureaplasma Treatment

- *Ureaplasma* spp are typically susceptible to the tetracyclines (e.g., doxycycline)
- Also susceptible to clarithromycin, azithromycin, moxifloxacin, and ofloxacin
Mycoplasma/Ureaplasma
Type and Screen/Cross for Minor Vulvovaginal Procedures

• Type and screens are unnecessary in patients undergoing surgeries known to result in minimal estimated blood loss (less than 50 ml)
  • Laser procedures
  • Wide local excisions
Magnetic Resonance Imaging

• Great for complex Bartholin cysts
• Unindicated for inclusion cysts
Vaginal Pap Smears Following Hysterectomy

After hysterectomy — women who have had a total hysterectomy do not need a Pap test unless:

• Hysterectomy did not remove the cervix
• Hysterectomy was done because of cervical cancer or precancer
• Exposure to diethylstilbestrol (DES) during mother's pregnancy
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<th>Screening Recommendation</th>
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<td>HPV and Cytology &quot;Cotesting&quot; every 5 years (Preferred)</td>
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Key Patient Information

Age: 30 to 64

HPV Status: [ ] [ ] [ ]

Pregnant: [ ] [ ]

Initial Testing Information

Cytology Result: ASC-US

NEXT
Repeat Cytology @ 12 Months or HPV Testing

Guideline Algorithm

Next Steps
Add 12 Month Cytology Followup Result
Add HPV Followup Result
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