



EM CASES SUMMARY

Episode 182 STIs Cervicitis, Urethritis

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Why should Emergency Medicine care about STIs?

STIs are on the rise with 20 million identified each year in the United States, and are under-recognized in the ED at least partly because only 30% of patients are symptomatic. While many STIs are relatively asymptomatic and/or relatively benign, certain STIs such as syphilis can have a mortality rate as high as 58%. Additionally, when recognized and treated early, ED physicians can prevent many of the long term sequelae of STIs such as Pelvic Inflammatory Disease and infertility. Many patients do not have access to primary care and the ED may be the only opportunity for screening, counseling and treatment of STIs.

General approach to cervicitis and vulvovaginitis

Common causes of vulvovaginitis include bacterial vaginosis, trichomoniasis, while cervicitis is commonly caused by chlamydia and gonorrhea. In the ED on first point of contact the organism is difficult to determine with certainty as no clinical feature or combination of features rules in any of these etiologies. Even with lab testing, the etiology will remain unknown in 83% of patients presenting with STI symptoms. Our approach needs to take this into consideration, especially when counseling patients.

History taking for suspected STI

- **Make the patient comfortable:** Consider a private setting/exuse visitors from the room, use understandable, non-judgemental language that normalizes questions, ask the patient if they would like a chaperone present
- **Elicit symptoms of STIs:** STI complaints may include abnormal vaginal or urethral discharge, lower pelvic pain, genital rash, painful/painless ulcer, dysuria, dyspareunia, throat pain, rectal pain or rectal discharge
- **Assess risk:** There is the 5Ps approach to eliciting risk of STIs (see below) however, *simply being sexually active in combination with any new symptoms of STI confers a high pretest probability*

<p>1. Partners</p> <ul style="list-style-type: none"> • "Are you currently having sex of any kind?" • "What is the gender(s) of your partner(s)?" <p>2. Practices</p> <ul style="list-style-type: none"> • "To understand any risks for sexually transmitted infections (STIs), I need to ask more specific questions about the kind of sex you have had recently." • "What kind of sexual contact do you have or have you had?" <ul style="list-style-type: none"> ◦ "Do you have vaginal sex, meaning 'penis in vagina' sex?" ◦ "Do you have anal sex, meaning 'penis in rectum/anus' sex?" ◦ "Do you have oral sex, meaning 'mouth on penis/vagina?" <p>3. Protection from STIs</p> <ul style="list-style-type: none"> • "Do you and your partner(s) discuss prevention of STIs and human immunodeficiency virus (HIV)?" • "Do you and your partner(s) discuss getting tested?" • For condoms: <ul style="list-style-type: none"> ◦ "What protection methods do you use? In what situations do you use condoms?" 	<p>4. Past history of STIs</p> <ul style="list-style-type: none"> • "Have you ever been tested for STIs and HIV?" • "Have you ever been diagnosed with an STI in the past?" • "Have any of your partners had an STI?" <p>Additional questions for identifying HIV and viral hepatitis risk:</p> <ul style="list-style-type: none"> • "Have you or any of your partner(s) ever injected drugs?" • "Is there anything about your sexual health that you have questions about?" <p>5. Pregnancy intention</p> <ul style="list-style-type: none"> • "Do you think you would like to have (more) children in the future?" • "How important is it to you to prevent pregnancy (until then)?" • "Are you or your partner using contraception or practicing any form of birth control?" • "Would you like to talk about ways to prevent pregnancy?"
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Are pelvic exams necessary for patients who present with symptoms suggestive of an STI?

Proponents of *not* performing a pelvic exam for females with symptoms suggestive of an STI cite studies that suggest no change in management when pelvic exams are performed for assessment of adnexal mass or during first trimester bleeding to assess for ectopic pregnancy in the outpatient setting. No studies to date prove that pelvic exams have no impact on management in patients suspected of an STI in the ED setting. Our experts recommend pelvic exams for all females suspected of an STI as they can both identify concerning lesions such as ulcers that patient's may not visualize/identify themselves and to help facilitate swabs to identify the specific etiology.

Indications for lab testing for STIs in the ED

Our experts recommend liberal testing for STIs because studies suggest that providers are poor at predicting STIs clinically, unidentified/untreated STIs may increase future risk of PID, PPROM, preterm birth, infertility, and small for gestational age birth, and because risks of testing are low. Having one STI should be considered a *biomarker for having other STIs*.

Indications for testing for STIs in the ED include:

- Symptoms of STI/risk factor(s) of STI (see above)
- Patient requests screening
- Pregnant people or considering pregnancy in the near future

***Pitfall:** A common pitfall is neglecting to test for other STIs such as syphilis, HIV and hepatitis in patients diagnosed with an STI. Having one STI should be considered a biomarker for risk of other STIs.*

Organism	Symptoms	Test	Treatment
Bacterial vaginosis (not STI, but more common if sexually active)	50% asymptomatic Change in vaginal discharge – odour, colour, amount	Vaginal swabs for gram stain and culture pH testing/whiff test – not specific	Metronidazole 2g PO once OR metronidazole 500mg PO x 7 days No partner treatment
Trichomoniasis (most common STI)	Majority asymptomatic Males – urethritis, epididymitis, prostatitis Females – vaginal discharge/ “strawberry” cervix	NAAT (PCR)	Metronidazole 2g PO once OR metronidazole 500mg PO x 7 days Test of cure in 1-3 months Test partners
Candidiasis (not STI, but can be contracted from sex)	Pruritis “Cottage cheese” discharge Dysuria Dyspareunia	Vaginal swabs for culture Microscopy/pH is non-specific	Fluconazole 1g PO or OTC topical antifungals
Gonorrhea	Males: urethritis, purulent urethral discharge Females often asymptomatic Pharyngitis	NAAT/PCR Or culture if drug resistance (gonorrhea is increasingly becoming multi-drug resistant)	Ceftriaxone 500mg IV or IM Followed by azithromycin 1g PO x 1 or doxycycline 100mg PO BID x 7 days CDC recommends monotherapy with ceftriaxone 3-7day test of cure culture or NAT at 2-3wks after treatment completed
Chlamydia	Cervicitis Epididymitis Urethritis Conjunctivitis	NAAT/PCR Or culture if drug resistance	Doxycycline 100mg PO BID x 7 days

Mycoplasma genitalium – an increasing cause of cervicitis/urethritis and PID

This is an organism that is often missed. Mycoplasma genitalium presents with symptoms of urethritis/cervicitis similarly to Gonorrhoea and Chlamydia or may be asymptomatic. Consider this organism in:

- Patients who have refractory urethritis, cervicitis or PID
- Patients with persistent symptoms of cervicitis/urethritis despite negative Gonorrhoea/Chlamydia or recent treatments for Gonorrhoea/Chlamydia

The test for Mycoplasma genitalium NAAT/PCR (culture available but takes 6 months)

Treatment depends on macrolide sensitivity:

- If macrolide sensitive: doxycycline 100mg PO BID *then* azithromycin 1g PO x 1 day *then* azithromycin 500mg PO x 3 days.
- If macrolide resistant: doxycycline 100mg PO BID *then* moxifloxacin 400mg PO OD x 7 days.

Summary of lab tests for ED patients suspected of vulvovaginitis/cervicitis/urethritis STI

- Gonorrhea and Chlamydia vaginal/cervical swabs *or* urine for NAAT/PCR testing (note that vaginal swabs have been shown to be as accurate as cervical swabs for Gonorrhea and Chlamydia)
- Gonorrhea C&S if drug resistant gonorrhea prevalent in local community
- Vaginal gram stain and culture (for Trichomoniasis and Bacterial vaginosis)
- Consider PCR swab for Mycoplasma genitalium in patients with persistent cervicitis/PID/urethritis
- Strongly consider testing for HIV/Hepatitis/syphilis in anyone with a presumptive or confirmed diagnosis of STI
- Rectal/pharyngeal testing should be done in patients who have rectal/pharyngeal symptoms, men who have sex with men (MSM), sex workers (or those with contact), or those who have had sexual contact with confirmed case

Are self performed vaginal swabs as accurate as physician performed vaginal/cervical swabs for STIs?

There is evidence to suggest that there is no significant difference in diagnostic accuracy between self-performed vaginal swabs and

physician performed cervical or vaginal swabs, so you can provide patients the option. However, this does not preclude the recommendation to perform a pelvic exam. Self-performed swabs should be reserved for those patients who refuse a pelvic exam or her prefer self-swabs.

Empiric treatment of cervicitis/urethritis

Empiric treatment of cervicitis/urethritis in the ED: **Ceftriaxone 500mg IM/IV followed by doxycycline 100mg PO BID x 7 days.** (note the change in recommendation from 250mg ceftriaxone to 500mg due to increasing rates of drug-resistant Gonorrhea) There is a balance between preventing long term sequelae of untreated STIs and preventing multi-drug resistance that has occurred with organisms like gonorrhea. The choice to treat empirically is patient specific however generally the benefits outweigh the risks of empiric treatment in:

- Patients with clinical high pretest probability of urethritis, cervicitis or vulvovaginitis
- Severe clinical condition
- Multiple risk factors for STI (sex work, unprotected sexual activity, travel)
- Poor access to follow-up after testing
- Age and potential for pregnancy/currently pregnant

It is important to engage in shared decision making with your patients and gauge their wishes regarding early treatment versus following up with primary care once results are available.

Discharge counseling for patients with suspected/confirmed STI

- For all STIs it is important to discuss sharing information with sexual partners and encourage that partners present to care and get treatment
- All partners with sexual contact with a patient 60 days prior to onset of symptoms or positive test should be referred for evaluation
- **Expedited partner treatment** – in some jurisdictions prescriptions may be written for sexual partners that are not directly assessed by the physician – find out the laws in your jurisdiction
- Involve your jurisdiction's public health early, and report as per jurisdictions requirements; inform patients about these requirements
- Ask patients to abstain from sexual intercourse for 7 days while being treated with doxycycline or 7 days after one time dose of azithromycin/ceftriaxone
- Counsel on safe sex practices going forward

ED Quality Improvement

- Consider having discharge checklist for patients being discharged with suspicion for or diagnosis of STI as there are multiple counseling points that need to be considered.
- When testing for STIs in the ED, consider whether your department has a quality assurance program to reach patients with the results of their tests.
- Consider having testing/treatment kits that allow for efficient empiric testing and treatment.
- Have easy access to local jurisdiction Public Health policies available to providers to help with counseling and mandatory reporting.

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