STDs: An Update on the CDC Guidelines

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Disclosures

• No conflicts of interest
Learning Objectives

• Review the clinical course of common sexually transmitted infections

• Discuss evidence-based updates in management of common sexually transmitted infections

• Focus on PCP-based discussions and interventions pertaining to prevention of STIs, coordination of care for STIs, and anticipatory guidance.
APRIL IS STD AWARENESS MONTH

SYPHILIS STRIKES BACK 2017
The Ultimate Resource

Centers for Disease Control and Prevention

MMWR
Morbidity and Mortality Weekly Report

Sexually Transmitted Diseases Treatment Guidelines, 2015

KEEP CALM THERE'S AN APP FOR THAT

CDC STD Tx GUIDE 2015
Gonorrhea
Gonorrhea

SC - 5th in the US

Gonorrhea Rates by Gender

Health Disparities: Gonorrhea Rates by Race/Ethnicity

Gonorrhea

- Gram negative diplococcus
- Infests mucous membranes
  - Cervix, uterus, tubes
  - Urethra
  - Conjunctiva, oropharynx
  - Anus
- Incubation is 2-5 days

GC Clinical Course - Females

- Most commonly asymptomatic
- Cervical friability and purulent discharge, dysuria
- Can progress to acute PID
  - Abdominal and pelvic pain, fever, nausea, vomiting, decreased appetite, mucopurulent discharge
- Long-term sequelae
  - Chronic pelvic pain (chronic inflammation, adhesions)
  - Chronic PID
  - Infertility
  - Ectopic pregnancy

GC Clinical Course - Males

- Purulent discharge, dysuria, testicular edema and pain
- Can progress
  - Epididymitis
  - Prostatitis
- Long-term sequelae
  - Urethral scarring
  - Infertility

Drug-Resistant Gonorrhea

- Gonococcal Isolate Resistance Project (GISP)
- Began in 1986
- 25 positive male urethral swabs per lab per month

Ciprofloxacin Resistant GC

Cefixime Resistant GC

Ceftriaxone Resistant GC

Therapeutic Option for GC

Ceftriaxone 250 mg IM once
PLUS
Azithromycin 1 gm PO once

Counseling and Rescreening

• All partners within the last 60 days should be treated or, if > 60 days, the last partner
• Abstain from intercourse until 7 days after both partners are treated
• Partners should be encouraged to be evaluated, tested and treated
• All patients with positive GC should be rescreened 3 months after treatment

Chlamydia
Chlamydia

SC - 9th in the US

Chlamydia Rates by Gender

Health Disparities: Chlamydia Rates by Race/Ethnicity

Chlamydia

• Gram (-), obligatory intracellular bacteria
• Infects the columnar cells of endocervix
• Incubation 1-3 weeks
• Most frequently reported infection in the US

Chlamydia Clinical Course

- 75% of females are asymptomatic
- 50% of males are asymptomatic
- #1 cause of mucopurulent cervicitis
- Cervical friability and purulent discharge
- Can progress to acute PID
  - Abdominal and pelvic pain, fever, nausea, vomiting, decreased appetite, mucopurulent discharge
- Long-term sequelae
  - Chronic pelvic pain (chronic inflammation, adhesions)
  - Chronic PID
  - Infertility
  - Ectopic pregnancy

Therapeutic Options for Chlamydia

Azithromycin 1 gm PO once

OR

Doxycycline 100 mg BID x 7 days

Expedited Partner Therapy for Chlamydia

- The patient’s partner is treated by the diagnosing physician, before the physician examines the partner, even if the partner is not a patient of that physician’s practice
- Endorsed by the CDC, ACOG, et al
- Heterosexual partners only
- Decrease reinfection by 20-25%

Expedited Partner Therapy for Chlamydia

• Always encourage partners to seek healthcare and screening for other STDs
• Assess for intimate partner violence and privacy issues before giving therapy
• Partner receives information regarding treatment, disease, and recommendation for seeking healthcare with additional STD testing

Expedited Partner Therapy for Chlamydia

Counseling and Rescreening

• All partners within the last 60 days should be treated or, if > 60 days, the last partner
• Abstain from intercourse until 7 days after both partners are treated
• Partners should be encouraged to be evaluated, tested and treated
• All patients with positive chlamydia should be rescreened 3 months after treatment
Pelvic Inflammatory Disease
PID

• By definition – infection of the upper genital tract
• Endometritis, salpingitis, oophoritis, peritonitis
• Ascending infection
  – <50% associated with GC or chlamydia
    • 15% of women with cervical GC will develop PID
    • 10-15% of women with cervical chlamydia will develop PID, but is usually less severe; can be asymptomatic for years
  – *M. genitalium* may be a significant cause
    • No testing available
  – Enteric and other pathogens in the vagina

PID

- Difficult to diagnose, but maintain a low threshold to treat and constant assessment of diagnosis
- Lifetime prevalence of PID in 18-44 year olds is 4.4%
- In women with a previous STD or other risk factor, lifetime prevalence is 10.0%

PID – Clinical Course

• Mucopurulent cervical discharge
  – If no wbc’s on wet prep, then PID is unlikely
• Pelvic and lower abdominal pain
• Fever
• Nausea and vomiting
• Decreased appetite

PID – Clinical Course

- Elevated wbc, ESR, CRP
- Sepsis
- Uterine tenderness
- Cervical motion tenderness (peritoneal sign)
- Adnexal tenderness
- Pelvic and abdominal tenderness
- Acute abdomen
- Pelvic mass (TOA)

Indications for Inpatient Treatment

• Clinical judgment
• Unable to exclude surgical emergencies
• Tubo-ovarian abscess
• Severe illness (sepsis)
• High fever
• Nausea & vomiting (inability to take PO meds)
• Lack of response to outpatient treatment within 48-72 hrs
• Pregnant

Rocephin 250 mg IM
AND
Doxycycline 100 mg PO BID x 14 days
+/-
Metronidazole 500 mg PO BID x 14 days

Reassess patient within 48-72 hours for clinical improvement

Treatment Options - Inpatient

Cefotetan 2 gm q 12 hrs OR Cefoxitin 2 gm q 6 hrs
AND
Doxycycline 100 mg PO or IV q 12 hrs
THEN
Doxycycline 100 mg PO BID to total 14 days

OR

Gentamicin IV daily dosing
AND
Clindamycin 900 mg IV q 8 hrs
THEN
Doxycycline 100 mg PO BID to total 14 days
OR
Clindamycin 450 mg PO QID to total 14 days
Counseling and Rescreening

- Male partners within the last 60 days should be empirically treated for GC and chlamydia, or, if > 60 days, the last partner
- Abstain from intercourse until both partners are treated and patient is asymptomatic
- Partners should be encouraged to be evaluated, tested and treated
- HIV testing should be offered/performed on all patients and partners with PID
- Rescreen patients with PID if they had a positive GC or chlamydia

PID – Coordination of Care

- Consider consultation or referral if no improvement on outpatient regimen
- Urgent/emergent evaluation for patients who look sick
- Patients with TOAs should be referred to a gynecologist for inpatient treatment
Human Papillomavirus Vaccination
Human Papillomavirus

- 13,000 new cases of cervical cancer per year
  - 4000 deaths per year
- 16,000 new anogenital and oropharyngeal cancers in males per year
- Causes vaginal and vulvar cancers in women
- Causes genital warts in men and women

<table>
<thead>
<tr>
<th>Viral Genotype</th>
<th>Disease</th>
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<tbody>
<tr>
<td>6 &amp; 11</td>
<td>90% of genital warts</td>
</tr>
<tr>
<td>16 &amp; 18</td>
<td>66% of cervical cancers</td>
</tr>
<tr>
<td></td>
<td>65% of male anogenital and oropharyngeal cancers</td>
</tr>
<tr>
<td>31, 33, 45, 52, &amp; 58</td>
<td>15% of cervical cancers</td>
</tr>
</tbody>
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HPV Vaccination

• 9-valent – 6, 11, 16, 18, 31, 33, 45, 52, & 58
• Originally approved in 2006 (quadrivalent)
• Males and females 9-26 years old
• Target for 11-12 years of age

HPV Vaccination Schedule

• If first dose at < 15 years, then 2 doses at time 0 and 6-12 months are given
• If first dose at < 15 years and < 6 months between the 1\textsuperscript{st} and 2\textsuperscript{nd}, then a 3\textsuperscript{rd} dose is needed
• If first dose at ≥ 15 years, then 3 doses at time 0, 1-2 months, and 6 months are given
• Immunosuppressed patients should have 3 doses

Vaccine Uptake

- 41.9% of girls and 28.1% of boys have had the HPV vaccine
- If uptake increased to 80%, 53,000 cases of cervical cancer would be prevented over the lifetime of an 11 year old
- Not associated with increased sexual activity nor incidence of STDs

Critics claim HPV vaccination will lead to promiscuity.

I am so turned on right now.
Prevention, Screening and Anticipatory Guidance
Risk Factors for STDs

- Early initiation of sex
- Residing in detention facility
- Use of injection drugs
- STD clinic attendance
- Men who have sex with men
- Concurrent multiple sex partners
- Sequential partnerships of limited duration
- Failure to use barrier protection
- Increased biologic susceptibility to infection
- Obstacles to accessing health care

Screening Recommendations

• Women
  – Annual screening for GC and chlamydia in sexually active women < 25 years of age
  – Screening for GC and chlamydia in sexually active women > 25 with risk factors
    • New sexual partner
    • Sexual partner with more than one partner
    • More than one sexual partner
    • Sexual partner with an STI
  – HCV screening if born between 1945 and 1965 or high risk factors

• Men
  – Screening for chlamydia is not recommended for sexually active males unless the population of young males has a high prevalence
  – Screening for gonorrhea is not recommended if the geographic area or community has a low prevalence of gonorrhea
  – MSM should be screened for GC, chlamydia and syphilis
  – HCV screening if born between 1945 and 1965 or high risk factors

Screening Recommendations

• HIV screening should be discussed and offered to all sexually active men and women

• Routine screening for asymptomatic diseases is not recommended (syphilis, trich, BV, HSV, HPV, HAV, HBV, HCV)

Primary Prevention

- HPV vaccination
  - Females 9-26 yo
  - Males 9-26 yo
  - Off label

- HBV vaccination
  - Patients who have not previously had the hepatitis B series

- HAV vaccination
  - All adolescents and young adults who have not previously had the hepatitis A series

Anticipatory Guidance

• Information regarding HIV infection, testing, transmission, and implications

• Integrate sexuality education into clinical practice
  – Sexual behaviors that are associated with risk for acquiring STDs
  – Prevention strategies including abstinence, consistent and correct condom use, reduction in the number of sex partners

• High-intensity behavioral counseling

• Motivational interviewing

• Educational materials
