Sexually Transmitted Disease
The Good, the Bad, the Ugly

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Disclosure: Dr. Horwich is a Consultant for I-TECH.
Objectives

- Update from 2015 STD guidelines
- Case discussions
- PrEP for HIV prevention
The Good

- STDs are preventable conditions
- Many are treatable and curable (GC, Chly, syphilis)
- Chronic STDs have good treatment as well- HAART, acyclovir
- We can reduce incidence w/good history taking, screening, Rx and prevention
Prevention of STDs

- Abstinence or delay in age of first contact
- Condom use
- HPV vaccination
- HAV, HBV vaccination
- STD screening-treat asymptomatic pts/partners
- HIV testing
- Partners PrEP
The Bad: United States

- 65 million people live with incurable STD
- 19 million new infections annually
  - ½ will have lifelong infections: HIV, HSV, HPV, Hep
  - 50% in ages 15-24yo
  - High rates in A.A. (71% GC, 48% chly, 52% syph)
  - MSM have 62% of syphilis cases
- Chlamydia, GC and HIV are the top 3 reportable infectious diseases
- 20-25% of those with HIV do not know status

Source: CDC
Rise of GC in Benton & Franklin Counties

Figure 4. Gonorrhea Cases and Incidence Rates per 100,000 population, Benton County, 1995-2014
Figure 4. Gonorrhea Cases and Incidence Rates* per 100,000 population, Franklin County, 1995-2014
Figure 5. Age-specific Gonorrhea Incidence Rates* by Gender, Benton County, 2014
Figure 7. Primary and Secondary Syphilis Cases and Incidence Rates* per 100,000 population, Benton County, 1995-2014
Figure 3. Age-specific primary and secondary syphilis incidence rates by gender, Benton County, 2014.
Figure 1. Chlamydia Cases and Incidence Rates per 100,000 population, Benton County, 1995-2014.
Figure 2. Age-specific Chlamydia incidence rates by gender, Benton County, 2014.

The graph shows the number of cases per 100,000 people for different age groups, categorized by gender (Male and Female). The vertical bars represent the number of cases, with error bars indicating the variability. The age groups are 0-9, 10-14, 15-19, 20-24, 25-29, 30-34, 35-39, 40-44, and 45+. The data suggests that the incidence rates are higher in younger age groups for both genders, with females generally having higher rates than males.
2015 STD Guideline Updates


Treatment for GC
Treatment for Chly in pregnancy
Use of NAAT for T. vaginalis
Role of M. genitalium in urethritis/cervicitis and Rx
Genital wart treatment options
HPV vaccine for male and female
Screening for Hep C, HIV, GC, Chly
Who should have a sexual history?

- Anyone who has not had sex yet?
  - Remember adolescents/teens are at increased risk of STDs/HIV
  - Can do both STD and contraception prevention
- Anyone who is currently having sex?
- Anyone who has ever had sex?
  - Age should not limit your taking a sexual history
  - Being married/single/widowed/divorced does not tell you about risk factors
Sexual history taking Pearls

- Remember the 5 Ps: Partners, Practices, Prev of pregnancy, Protection for STD, Past h/o STD
- Every patient should have sex history
- Cover pts lifetime, then interim hx
- Be non-judgmental
- Avoid ambiguous ?-ie are you sexually active?
CDC Screening Guidelines

General

- Annual Chlamydia test in women < 25
- Chlamydia test in 3rd trimester
- HIV Ab ages 13-64+, pregnant women
- Syphilis testing in pregnancy, at risk patients
- GC test for all at risk pts (age <25, CSW, mult partners, IVDU, previous STD)
- Hep C Ab- born 1945-1965, IVDU, HIV
- Hep B Ag- at risk pts
CDC Screening Guidelines
MSM

- **Annual testing**
  - HIV serology
  - Syphilis serology
  - Urethral GC/Chly with NAAT
  - Rectal GC/Chly w/NAAT (not FDA cleared)
  - Pharyngeal GC w/NAAT (not FDA cleared)
  - HbsAg, HAV (vaccinate if negative)
  - HCV Ab
    - Test more often if risk indicates (q 3 mo)
The Ugly: Case 1

- 41 yo married man comes to clinic c/o sore throat and low grade fever
- PE: T 99F
- Pharynx has ulcer, mild cervical lymphadenopathy
Oral Ulcers

- DDx: HSV, aphthous ulcers, syphilis, viral
- Add’l hx: pt had MSM oral sex 8 days before presentation
- HSV confirmed
- Rx: acyclovir 400 mg tid x 7-10 days
- HIV, syphilis, GC, CT were negative
Herpes simplex virus

- Seroprevalence: 17% (US) up to >80% (global HIV+)
- Majority of infection asymptomatic
- Viral shedding w/both symptomatic and asymptomatic infection
- Dx: PCR most sensitive
- Screening not currently recommended
- Antiviral can reduce shedding but not HIV acquisition
  - Acyclovir or valacyclovir equal efficacy
The Ugly: Case 2

- 32 yo male presents w/2 day h/o blurry vision, floaters and occ blue tint to his vision. No fevers, chills, no rashes. Pt is seen in clinic and had normal looking eye exam. No other findings noted. He was seen by Ophthalmology and no acute findings were noted. No testing was done.

- Pt returned one week later with rash and vision getting worse.
Syphilis

- Treponema Pallidum
- Wide clinical presentation “the great imitator”
- Diagnosis: Enzyme immunoassay, Quantitative RPR and treponemal tests
- Treatment: Benzathine PCN
- Test and treat partners
- LP not recommended unless presence of neurologic symptoms – vision changes count
  - Consider LP if no improvement in titer post Rx
  - Consider in HIV+: controversial
Syphilis WA state

- Continue to have epidemic of syphilis
- 6 cases presenting as ocular syphilis- 2 have gone blind
- All are MSM, 50% are HIV +
- Any neuro symptoms requires immediate LP and treatment
- Report to public health immediately
Clinical presentations of STDs esp syphilis and HIV

- Acute mononucleosis syndrome
- Fatigue
- Fevers
- Rashes/skin lesions
- Pharyngitis
- Diarrhea
- Arthralgias/Arthritis/vasculitis
- Abdominal pain
- Hearing loss
- Abnormal LFTs, platelet
- Weight loss
- Dementia
- Abnormal PAP tests
- Genital lesions/discharge/pain
- Vision changes
- Paresthesias
Primary Syphilis-Chancre

Source: CDC/NCHSTP/Division of STD Prevention, STD Clinical Slides
Secondary syphilis - alopecia
Syphilis testing

- Start with treponemal immunoassay
  Automated, less false negative, less lab hazard

- Must do a quantitative RPR
  - Distinguish between old vs new infection

- Drawback for initial test—cannot distinguish between past and current infection
EIA

EIA+ do RPR

EIA- stop

RPR+
Syphilis-past or present

RPR-
Do TP-PA

TP-PA+
syphilis

TP-PA neg
Syphilis unlikely
The Ugly: Case 3

- 25 yo male c/o redness and discharge from the eye x 1 day. No past h/o STD
- Pt had new sexual contact 10 days ago including oral sex with female partner
- PE: afebrile
- Exam: notable for erythematous conjunctiva with discharge noted
Gonococcal Ophthalmalmia

Source: CDC/NCHSTP/Division of STD Prevention, STD Clinical Slides
Gonococcal evaluation & treatment

- Initial test: NAAT or cx from contact sites
- First drug of choice: Ceftriaxone IM
  - 250 mg dose preferred esp if pharyngeal
  - Infant 25-50mg/kg IV or IM up to 125 mg
  - Cefixime or cefpodoxime is alternative
- Quinolones not recommended due to resistance
- Plus Azithromycin (or emycin) for chly
- Partner treatment
- Test of cure recommended esp if pharyngeal
Gonococcal urethritis
Gonococcal cervicitis
Disseminated Gonorrhea—Skin Lesion on Foot

Source: CDC/NCHSTP/Division of STD Prevention, STD Clinical Slides
Cephalosporin resistance

- Source: MMWR Aug 2011
  - Increase in cefixime and ceftriaxone resistant GC
  - Cefixime resistance rose from 0% in 2000 to 1.4% in 2010 (up to 4% in MSM)
  - Important to have sensitivity for GC
  - If failure- retreat with IM ceftriaxone and 2 gm azithromycin
  - Make sure partners are treated
Non-gonococcal urethritis

- Etiology: chly: 15-40%, M. genitalum 5-25%, HSV 15-30% with primary, T. vaginalis 5-20%
- DX: NAAT for chlamydia
- Gram stain with WBC on high power field
- RX: Azithromycin - first choice
  - For M. genitalum may need longer dosing-higher macrolide resistance with only single dose

Sex Trans Disease 2008:84:72-6
Trichomonas

- Diagnosis can be difficult
- Vaginal secretion slide less sensitive
- FDA approved PCR for GC/CT can be modified to include trichomonas and sensitivity is higher
- Point of care with Trichomonas rapid test also available
Trichomonas

"Strawberry" cervix due to *T. vaginalis*
Case 4: prevention

- 28 yo HIV- MSM asks if he should start that pill everyone is talking about
- Sex Hx: MSM, stable HIV+ partner on HAART with viral suppression
- Admits to ‘open’ relationship
- Is he eligible for Pre-exposure prophylaxis (PrEP)?
Average Risks of transmission of HIV per episode

- Percutaneous: 0.3%
- Receptive anal: 1-2%
- Receptive vag: 0.1-0.2%
- Insertive anal: 0.06%
- Insertive vag: 0.03-0.14%
- Receptive oral: 0.06%
- Needle sharing: 0.67%
Pre-Exposure prophylaxis

- Partners PrEP: hetero-discordant couples, N=4700, 75%-90% HIV reduction with good adherence
- IPrEx: MSM, 44%-92% reduction of HIV, N=2500
- FemPrEP & VOICE: at risk women - no significant risk reduction but poor adherence, n=1950
- TDF2: hetero-discordant, RRR 63%-78%, n=1200
- Ipergay (CROI 2015): n=400, MSM intermittent Truvada, 86% lower HIV rates than placebo
PrEP

- Who is eligible
  - MSM or hetero with HIV+ partner
  - Multiple partners
  - IVDU with needle sharing
  - MSM with other STDs (GC/syphilis)
Work up and prevention

- Must be HIV Negative
- Baseline cbc, cmr, STD eval, hep c and hep bsag and hep bsab
- Normal renal fx (crcl >60 ml/min)
- No symptoms of acute HIV
- If HepB sAB- and Hep BsAg- vaccinate
- If active Hep B- do work up first
- Use tenofovir/emtricitabine (truvada™) daily
PrEP monitoring

- Monitor for adherence
- HIV testing every 3 mo
- CBC, CMR: 3 mo, 6 mo if stable q 6mo
- STD testing as needed but q3mo
- If not having sex can stop med (unless chronic active Hep B)
- Condoms still recommended
Key Points

- STDs are common - all pts need a comprehensive sexual history
- Prevention with vaccine (HPV, Hep B) and condoms (? HSV suppression)
- Rx GC with ceftriaxone IM
- Test for syphilis esp in MSM
- Consider PrEP in appropriate population
- [www.cdc.gov/std/treatment/2015](http://www.cdc.gov/std/treatment/2015)