Small Interactive Session:

Update on Sexually Transmitted Infections Advanced & Interesting Cases

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Objectives

Participants should be able to:

- Discuss clinical presentation, workup, and treatment of common STIs
- Review and reference current guidelines for screening and treatment of STIs
- Recognize atypical STI presentations and treatment options
- Contextualize STIs among a diverse patient population (including relationship structures and sexual/gender diversity)

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Sex & Gender

- Assigned sex at birth (AMAB or AFAB)
- Gender = social and cultural distinctions mapped on biology
- Sexuality = attraction, behaviors, orientation

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Gonorrhea/Chlamydia Screening

Screen for gc/Ct

Genital | Pharyngeal | Rectal

based on

1) exposure route **2)** local guidelines **3)** population prevalence

- Screen women ≤25y annually
- Consider screening men ≤25y in areas of ↑prevalence or risk factors
- Screen MSM annually (Q3-6 mo for MSM at high risk)

CDC

*Screening for pharyngeal Ct is not recommended due to low prevalence

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Men who have Sex with Men

MSM (Men who have sex with men) – a heterogeneous population of men who engage in sexual behaviors involving men

MSM may identify as:	
Gay	Men who identify their sexual orientation as "gay"
Bisexual	Sexual attraction to more than 1 gender
Heterosexual	Sexual attraction to female presenting partners
Gender nonbinary	Behavior/appearance does not conform with norms
Transgender	Gender assigned at birth does not match identity

**Identities may be temporary, before sexual debut, or after sexual sunset*

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Consensual Non-Monogamy (CNM)

- Relationship structure with partners other than primary
- Examples: open, swingers, monogamish, unilateral, medical
- CNM partners
  - Are no more likely to be diagnosed with a STI
  - Express similar rates of both commitment and jealousy
  - as monogamous partners

Rubel 2015

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HIV Preexposure Prophylaxis (PrEP)

Tenofovir/emtricitabine PO QD or
Cabotegravir-IM Q2 months

- >99% effective at reducing risk of HIV acquisition
- "Safer than Aspirin"
- PrEP use is "protected" per CDC

"All sexually active adult and adolescent patients should receive information about PrEP." CDC 12/2021

- Potential for pericoital dosing, implatable, etc.

Grant 2010, Molina 2015, Hare 2019, CDC 2021

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Proctitis

Rectal inflammation
with pain, discharge, bleeding
+/- tenesmus and spasm

Differential:

- Idiopathic
- Inflammatory Bowel Disease
- Infection: ie *C Diff*
- Ct/gc/LGV/HSV/syphilis

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2020 CDC Guidelines Update: Gc Treatment

Ceftriaxone 500 mg IM once
- Alternative: Gentamicin 240 mg IM once + Azithromycin 2 g PO once
  OR Cefixime 800 mg PO Once
- Weight ≥150 kg (300 lb), ceftriaxone 1g IM once
- *If chlamydial infection has not been excluded:*
  doxycycline 100 mg PO BID x 7 days.

Pharyngeal gc exceptions
- No alternative to ceftriaxone, consult infectious diseases specialist
- If chlamydia coinfection is identified treat:
  doxycycline 100 mg PO BID x 7 days

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Lymphogranuloma Venereum (LGV)

- Chlamydia Trachomatis serovars L1, L2, L3
- Inguinal/femoral lymphadenopathy
- +/- anogenital ulceration & severe proctitis
- **Clinical diagnosis,** specific diagnostic testing not widely available
- Rx: Doxycycline 100mg BID x 21 days
  - Partners treated with 7d doxy

CDC

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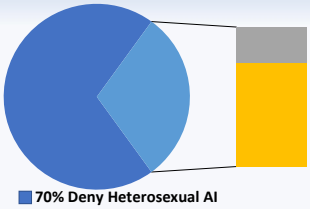
Anal Intercourse & Heterosexual Identity



70% Deny Heterosexual AI
30% Report Heterosexual AI
20-30% Report Condom Use During AI
70-80% Deny Condom Use During AI

Habel 2018

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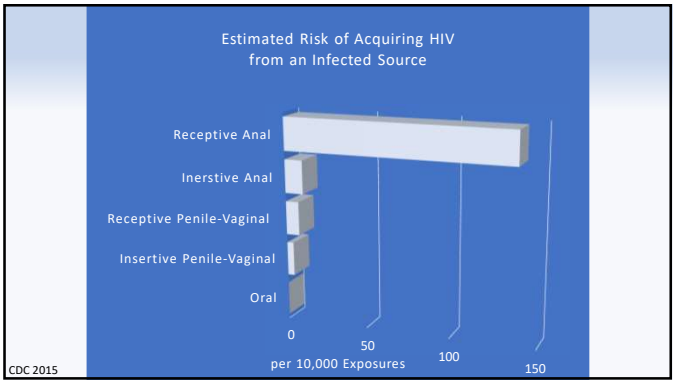

CDC 2015

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Anal Ulcers

- Differential
  - Fissure
  - Traumatic
  - Severe dermatitis
  - HSV
  - LGV
  - Syphilis
  - Malignancy (SCC)

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Syphilis

- Primary syphilis - painless Chancre
- But, anal chancre can be **painful**
- Firm, well demarcated ulcer
- Appears 2-6 weeks post exposure

- Treponemal Ab testing ~6 wks
  - TPPA, FTA-ABS
- RPR testing ~6-8 wks

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Syphilis Reverse Sequence Testing

- Treponema Pallidum Ab testing reflexed to RPR
- Pro: sooner detection, reduced risk of false positive
- Cons: limited use in patients with history of syphilis

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Syphilis Management

- "Significant change" 2 fold change in titer
  - 1:2 → 1:8 = think new infection
- Cure is a 4 fold decrease in titer @ 6 mos
  - 1:64 → 1:2 = resolved infection
- Caveats: Inter- intra- lab variability, Serofast

- Rx: Benzathine PCN 2.4 million U IM
  - 1 dose: 1° or 2° infection, infection <1 yr (early latent)
  - 3 dose: late latent infection. >12 mo
- IV PCN G if neuro involvement

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STI Prophylaxis

2 Pilot Clinical Trials have shown doxycycline as a potential STI prophylaxis

- Doxycyline 100mg daily in HIV-positive MSM
  - 30 men who have had syphilis 2x+ since their HIV infection
  - No difference in risk behavior between groups
  - 70% reduction in acquisition of any STI (trend to Ct and syphilis)
  - >60% adherence by serum drug levels
- Doxycycline 100 mg 2 tab 72 hrs post-coital in MSM on PrEP
  - 232 HIV-negative MSM on intermittent PrEP
  - Median 7 pills per month (max 6 pills per week)
  - No difference in risk behavior between groups
  - ~70% less likely to acquire syphilis or Chalmydia

Doxycycline for STI prophylaxis is OFF-LABEL

Bolan 2015, Molina 2017 (CROI2017)

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Sexual History Taking

Why do we take a sexual history?

- Determine screening, diagnostics, treatments, and immunizations
- Document rationale for expensive testing

Sexual History not one size fits all; **there is no formula**

Is counselling on safer sex effective?

- Make patients aware their risks
- Not counselling may be perceived as condoning behavior

Focus on **Behaviors** & **Anatomy**

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Chancroid

- Caused by H. ducreyi
- Diagnosis is clinical
  - Painful genital ulcer(s) and inguinal adenopathy
  - R/O syphilis and HSV
- Increases risk of HIV acquisition
- Treatment (any of the following)
  - Azithromycin 1g PO once
  - Ceftriaxone 250mg IM once
  - Ciprofloxacin 300mg PO x 3d
  - Erythromycin 500mg PO x 7d
- *Extremely rare in the US and no commercially available lab test*

CDC

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Granuloma Inguinale (Donovanosis)

- Caused by Klebsiella granulomatis
- Painless, slowly progressive anogenital ulcers without lymphadenopathy
- Treatment doxycycline 100mg BID x 21 days until all lesions have completely healed
- *Extremely rare in the US and no commercially available lab test*

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HSV Diagnosis

- NAAT/PCR for HSV DNA
  - Time sensitive
- Limitations of serology
  - Window period

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Primary Genital HSV Features

- Extragenital manifestations common
- Fever, HA, malaise, myalgias
- Aseptic meningitis rare
- New lesions can manifest 4-10d after onset

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Recurrent Genital HSV Features

- Prodromal symptoms common but not always
- Recurrences in similar cutaneous distribution
- HSV 2 recurrence more common 4-5x a year

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Primary Treatment

Acyclovir	400mg	TID	7-10 days
	200mg	5x/D	7-10 days
Valacyclovir	1000mg	BID	7-10 days
Famciclovir	250mg	TID	7-10 days

Treatment can be extended if healing is incomplete after 10 days of therapy.

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Recurrent Treatment (within 72 hrs)

Acyclovir	400mg	TID	5 days
	800mg	BID	5 days
	800mg	TID	2 days
Valacyclovir	500mg	BID	3 days
	1g	QD	5 days
Famciclovir	125mg	BID	5 days
	1g	BID	1 day
	500mg once followed by 250mg BID x 2 days		

If HSV2 or frequent recurrences consider suppressive therapy

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Drug Resistant HSV

OFF-LABEL therapy for antiviral resistant HSV

- Cidofovir topical 1%-3% ~~QD~~ BID
- Cidofovir IV 5mg/kg once weekly
- Foscarnet 40-80mg/kg IV Q8hrs until clinical resolution

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Gender Nonbinary (GNB)

"I've always been very free in terms of thinking about sexuality, so I've just tried to change that into my thoughts on gender as well.

Non-binary/genderqueer is that you do not identify in a gender. You are a mixture of all different things. You are your own special creation.

*I've sometimes sat and questioned**, do I want a sex change? It's something I still think about: 'Do I want to?' I don't think it is,***

*When I saw the word non-binary, genderqueer, and I read into it, and I heard these people speaking, I was like, 'F*ck, that is me.'"*

-Sam Smith

Credit: Vanity Fair 2019; Deb Dunn PA-C GLMA 2019

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Sexually Transmissable Enteric Infections

- Giardia lamblia and Hystolitica entamoeba
  - Diarrhea, gas, flatulence, cramping, nausea, dehydration, or NO SYMPTOMS
  - Dx 3 stool samples on separate days ("ova and parasites")
- Giardia treatment
  - Metronidazole 250 mg PO TID x 5-7 days
  - Tinidazole 2g PO once
  - Albendazole 400mg PO QD x 5 days
- H. entamoeba treatment
  - Metronidazole 750 mg PO TID x 10 days
  - Followed by paromomycin 50mg TID x 7 days (IF symptomatic or cysts on examination of samples)

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Anolingus

Hepatitis A

- Oral-fecal transmission
- HAV vaccination recommended for MSM
- Supportive management
- 10-15% relapse in 6 months
- PEP with vaccine or immunoglobulin

CDC

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Sexual Transmission of Hepatitis

HBV

- Vaccine recommended for all patients
- PEP with HBV vaccination or immunoglobulin
- Check titers if at risk for occupational and non-occupational exposure

HCV

- ↑Transmission with fisting and anal intercourse
- ↑ risk in MSM, HIV-positive, and PrEP users
- No known postexposure prophylaxis (PEP)
- Several multidrug PO treatments available

CDC

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Human Papillomavirus (HPV)

- The most common STI
- Can affect the genital, mouth, & anus
- LR HPV can cause condyloma (uncommon)
- HR HPV can cause cancer

"Most sexually active people who are not vaccinated get HPV infection at some point in their lives, even if they only have one sexual partner."

-NYC DOH

CDC, NYC DOH

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FOR IMMEDIATE RELEASE
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Source: Elizabeth Fernandez (415) 502-6397
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Treating Anal Cancer Precursor Lesions Reduces Cancer Risk for People With HIV

Groundbreaking National Clinical Trial Halted Due to Therapy's High Success Rates

Treating precursor anal cancer lesions can significantly reduce the risk of progression to full blown anal cancer among people living with HIV, according to results of a large, phase 3 study led by researchers at UC San Francisco.

In a randomized clinical trial with 4,446 participants, known as the Anal Cancer/HSIL Outcomes Research (ANCHOR) study, researchers found that by removing high-grade squamous intraepithelial lesions (HSIL), chances of progression to anal cancer were significantly reduced.

The trial is the first to show such findings and was performed at 21 clinical sites around the United States. Results are being prepared for peer-reviewed publication and are being shared now because of the public health importance of the findings.

The study caps decades of research into the history, prevention and treatment of anal cancer and its precursors. It also provides important information for developing standard of care guidelines for people at high risk of anal cancer, including screening for and treatment of anal HSIL, said lead investigator Joel Palefsky, MD, a professor of medicine at UCSF.

*ANCHOR data show for the first time that, like cervical cancer, anal cancer can be prevented even in

USCSW

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Anal Cytology

- ↑ Sensitivity ↓Specificity
- Various methods
- 3-10% unsatisfactory
- Abnl result → HRA ("anal colposcopy")

NO Special Equipment **NO Special Training**

Start to consider how you'll care for/refer your patents who are LWH

Cranston 2004, Darragh 2011

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Anal Pap

Equipment

- water-moistened synthetic-fiber swab with non-scored stick
- Liquid media (same as cervical cytology)

1. Evert anal verge.
2. Blindly insert one half of swab through the anal verge.
3. Apply lateral pressure in a circular motion while withdrawing the swab (10+ seconds)
4. Stir into liquid preparation (15+ seconds)

https://www.youtube.com/watch?v=YyzmLYFc7Yc

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HPV Vaccination

- Recommended up to age 26, considered up to age 45
- For ages 27-45 consider:
  - Prior exposure to HPV
  - Potential for future exposure to HPV
  - Cost/insurance coverage
- No current recommendation for HPV9 after HPV4

CDC 2019

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Take Home Points

- Sexually transmitted infections are common and presentations vary in different patients and anatomical sites
- Screening, testing, and treatment guidelines continue to evolve and should be used alongside clinical decision making
- Sexual history taking should be focused to understand the context for an individual's screening, testing, treatment, and risk reduction needs and opportunities
- Don't assume anything about an individual's gender or sexuality

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Questions?

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