Advanced Sexually Transmitted Infection Cases

Jonathan Baker PA-C
He | Him | His
Laser Surgery Care, NYC
NYC District Director, NYSSPA
AAPA Liaison to GLMA
Past President, LBGT PA Caucus

Kerin Berger PA-C
She | Her | Hers
LA LGBT Center | Los Angeles, CA
Sexual Health
High Resolution Anoscopy
Dermatology

1

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Financial Disclosure

The presenters have no relevant financial interests, arrangements or affiliation to disclose which could be perceived as a conflict of interest in the contest of the subject of this presentation

Off-label indications will be included; off-label use will be identified

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

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Case 1

A 40-year-old woman (AFAB, endosex, “she” series) with a h/o pulmonary embolism presents to your office a routine visit

She is not currently on OCP and reports consistent condom use

She declines STI screening despite multiple sexual partners

What should she be screened for?

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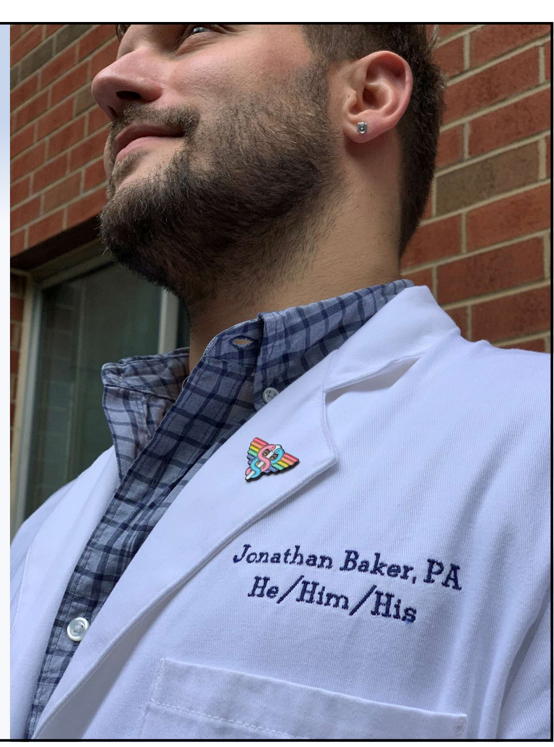
Sex vs Gender

- Sex = Biological differences
- Gender = social and cultural distinctions mapped on biology
- Sexuality = attraction, behaviors, orientation



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Case 1

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She is not currently on OCP and reports consistent condom use

She declines STI screening despite multiple sexual partners

What should she be screened for?

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Case 1

She admits to:
- Receptive vaginal sex with condom

…As well as…
- Receiving oral sex (vaginal only)
- Giving oral sex
- Receptive anal sex condomless
- Sharing sex toys (vaginal)
  - With female partners

She is at risk for:
- HSV, HPV, MC, infestation, syphilis

…As well as…
- Vaginal gc/Ct, syphilis, HIV
- Oral gc/Ct, syphilis, HIV
- Rectal gc/Ct, LGV, syphilis, HIV
- Vaginal gc/Ct, syphilis, HIV
  - Trichomonas, bacterial vaginosis

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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 months for MSM at high risk)

CDC

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

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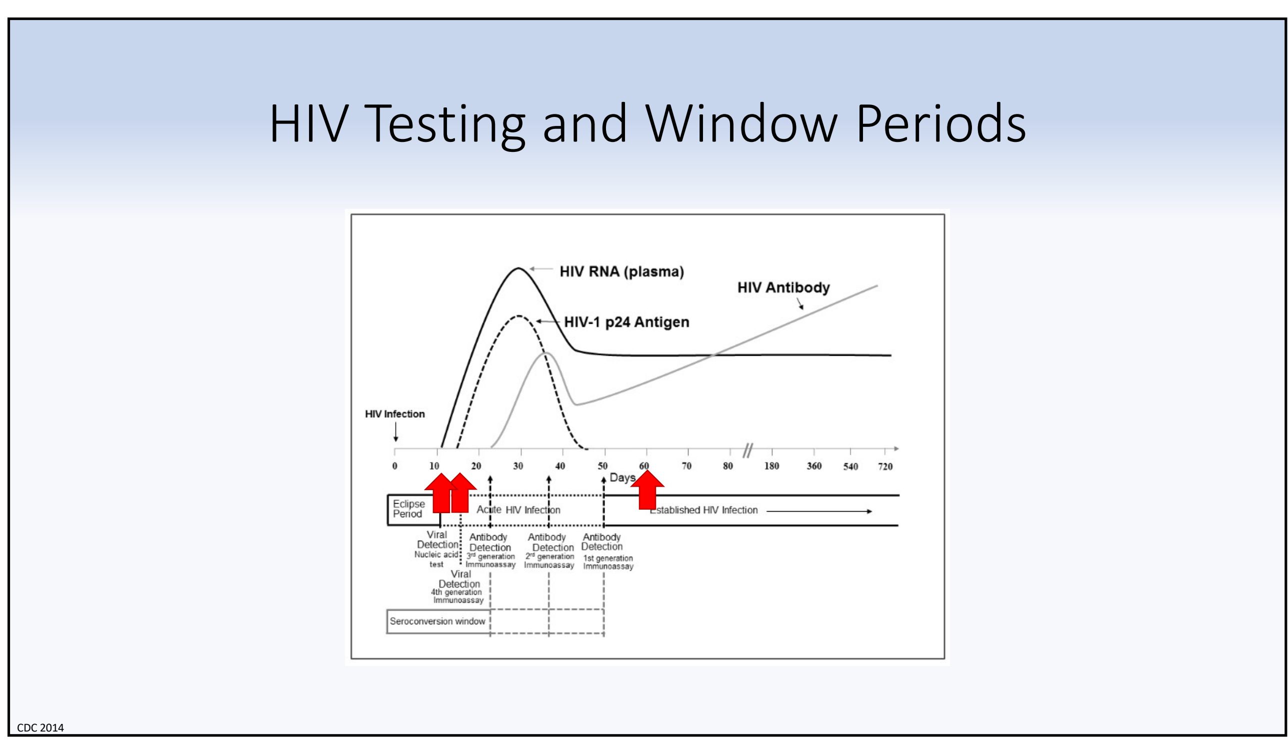
Case 1

Test	Result	Reference Range
HIV Ag/Ab	Non-Reactive	Non-Reactive
TPPA/RPR	**TPPA+ 1:2**	Non-Reactive
Genital gc NAAT	Negative	Negative
Genital Ct NAAT	Negative	Negative
Rectal gc NAAT	Negative	Negative
Rectal Ct NAAT	**POSITIVE**	Negative
Oral gc NAAT	Negative	Negative
Oral Ct NAAT	Negative	Negative
Cervical cytology	**ASCUS**	Benign
Reflex HR HPV	**DETECTED**	Not Detected



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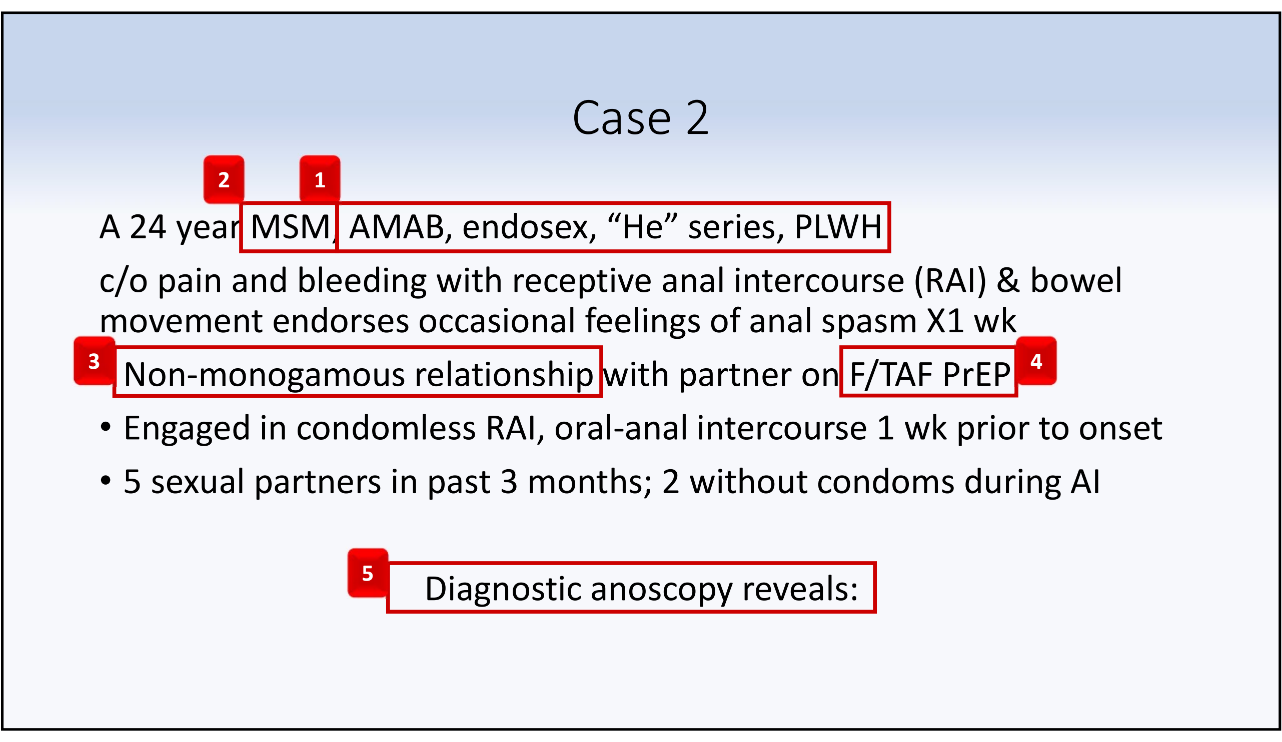

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Men who have Sex with Men

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, unilateral, Chelsea monogamy, 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)

- F/TAF or F/TDF once daily
- >99% effective at reducing risk of HIV acquisition
- "Safer than Aspirin"
- PrEP use is "protected" per CDC

Off Label PrEP

- Limited evidence for "on-demand" dosing

Grant 2010, Molina 2015, Hare 2019

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Case 2

A 24-year-old MSM, AMAB, endosex, “He” series, PLWH

c/o pain and bleeding with receptive anal intercourse (RAI) & bowel movement endorses occasional feelings of anal spasm X1 wk

- Non-monogamous relationship with partner on F/TAF PrEP
- Engaged in condomless RAI, oral-anal intercourse 1 wk prior to onset
- 5 sexual partners in past 3 months; 2 without condoms during AI

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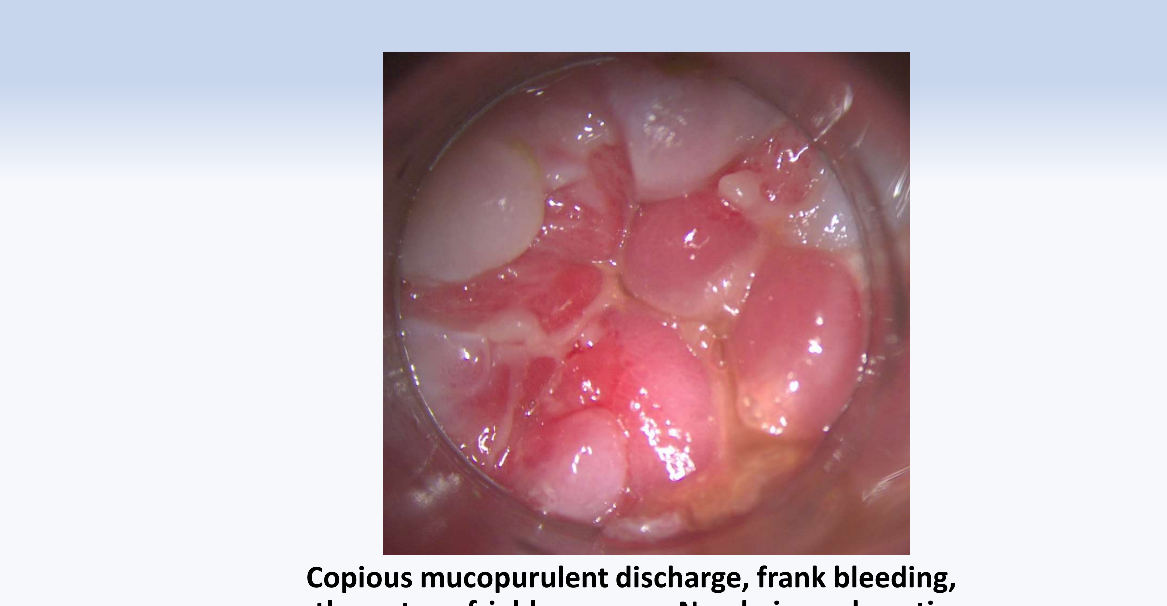

Copious mucopurulent discharge, frank bleeding, erythematous friable mucosa. No obvious ulcerations.

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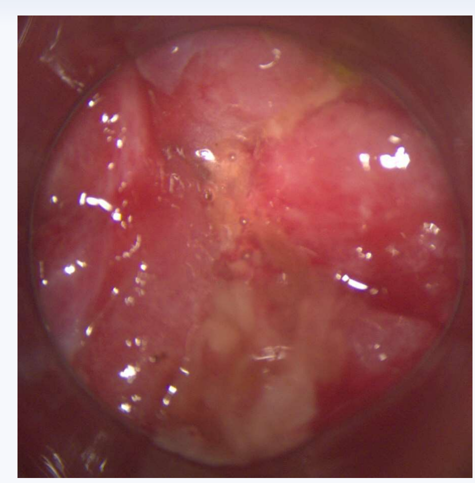
Proctitis

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

Differential:

- Inflammatory Bowel Disease
- Infection: ie *C Diff*
- Ct/gc/LGV
- HSV
- Syphilitic proctitis



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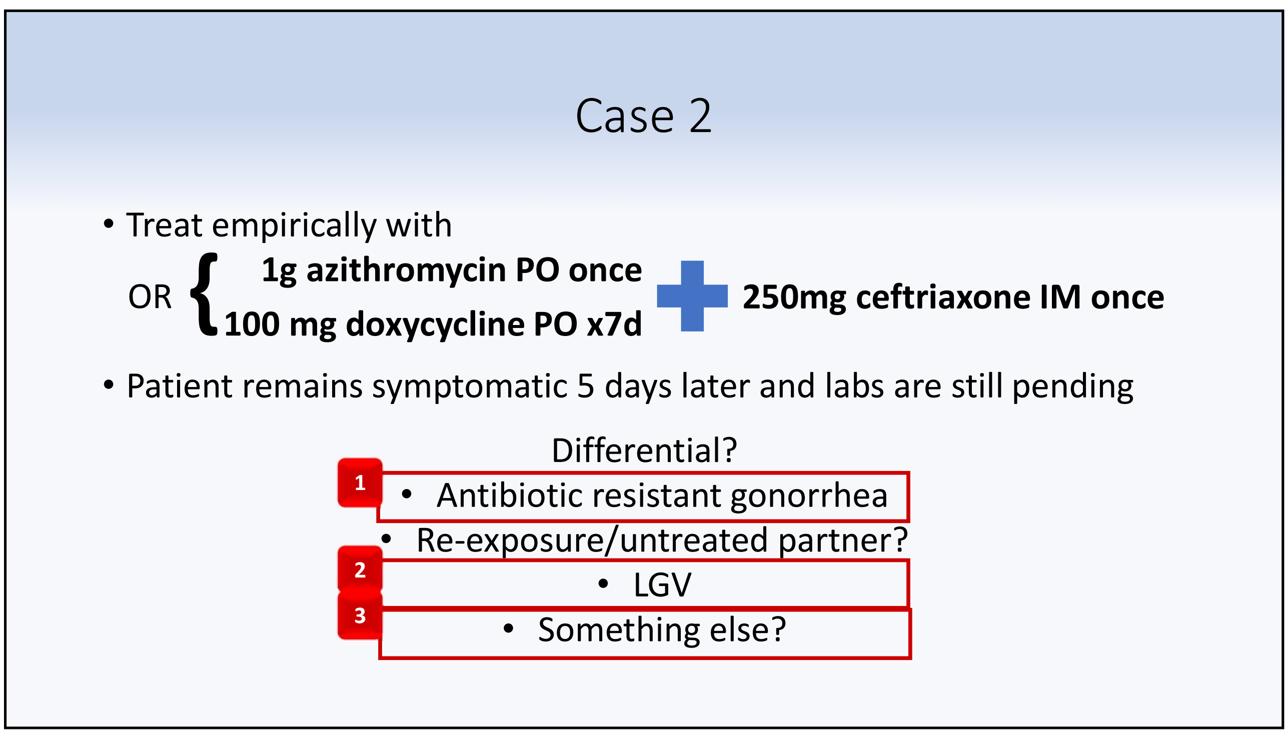

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Antibiotic Resistant Gonorrhea

The Gonococcal Isolate Surveillance Project (GISP) was established in 1986 to monitor trends in antimicrobial susceptibilities of N. gonorrhoeae strains in the US

CDC

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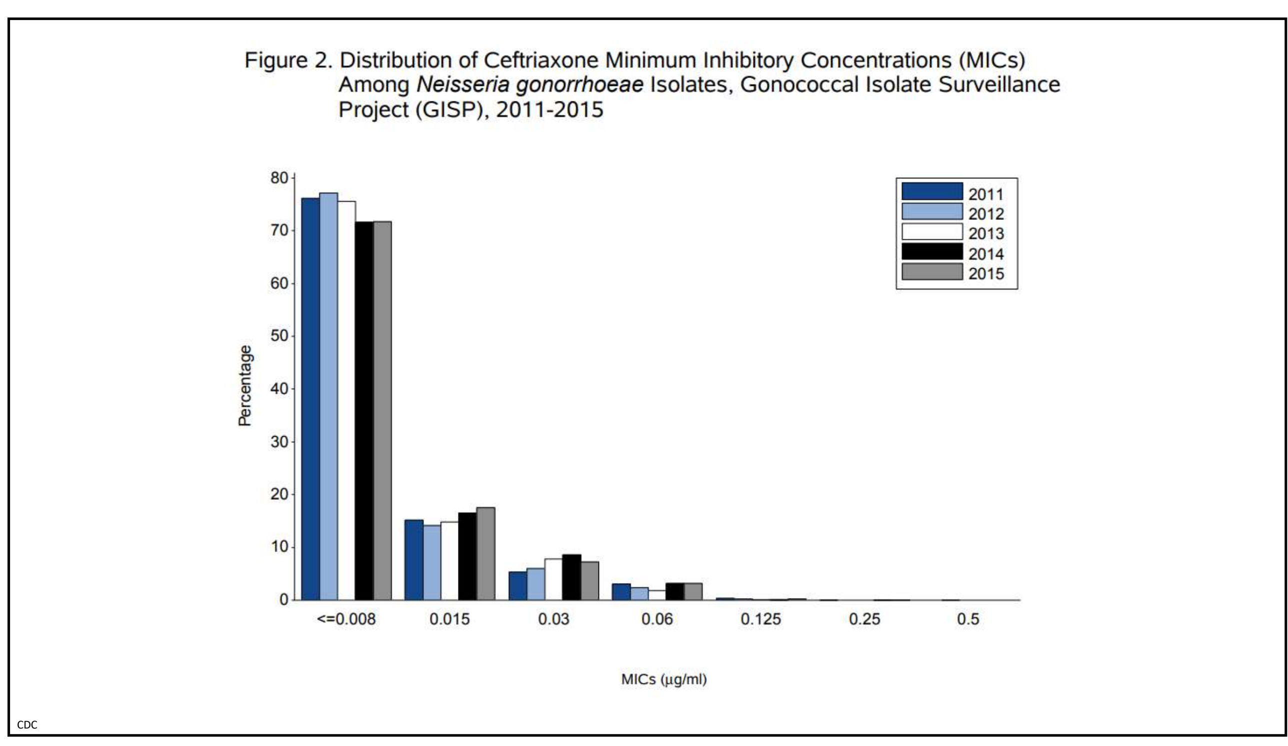

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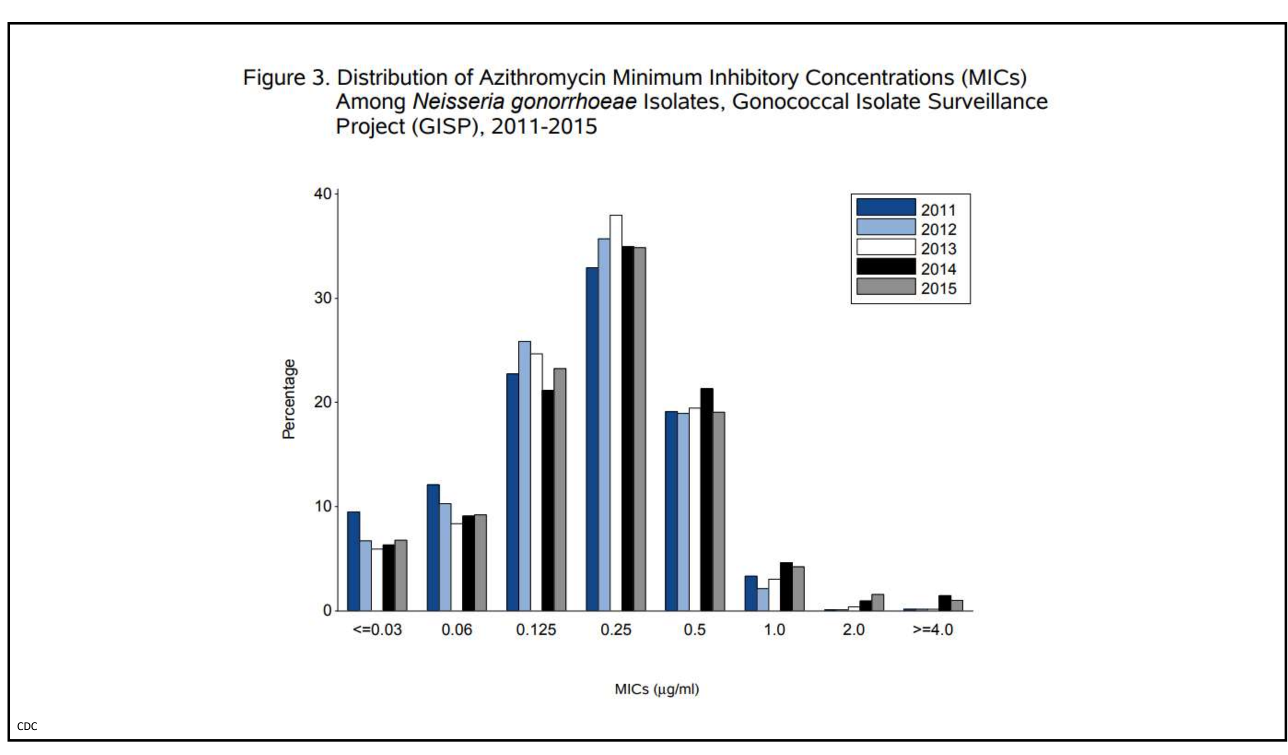

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www.cdc.gov

In the United States, reports of apparent failures of infections to respond to treatment with CDC recommended therapies should be reported to Robert D. Kirkcaldy, MD, MPH (gispinfo@cdc.gov; 404-639-8659). Surveillance & Data Management Branch, Division of STD Prevention, Centers for Disease Control and Prevention, 1600 Clifton Rd. NE, Mailstop E02, Atlanta, GA 30333.

In the United States, it is also recommended that isolates from certain infections be submitted to the Neisseria Reference Laboratory at CDC for confirmation; these infections comprise those that fail to respond to CDC-recommended therapy and isolates determined to exhibit intermediate resistance or resistance (see pg. 6, Recommended Testing and Confirmatory Testing, for a complete list): John Papp, Ph.D. JPapp@cdc.gov; 404-639-3785), Neisseria Reference Laboratory, Centers for Disease Control and Prevention, 1600 Clifton Rd. NE, Mailstop A12, Atlanta, GA 30333.

CDC

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Antibiotic Resistant Gonorrhea

- CASE: 19-year-old heterosexual male with multiple sexual partners (penile-vaginal), refractory disease after 500mg ceftriaxone

- Resistance testing sent
- Retreated 500mg ceftriaxone once and symptoms resolved

- Gc can be susceptible to: penicillin, cefixime, ceftriaxone, tetracycline, ciprofloxacin, azithromycin

CDC

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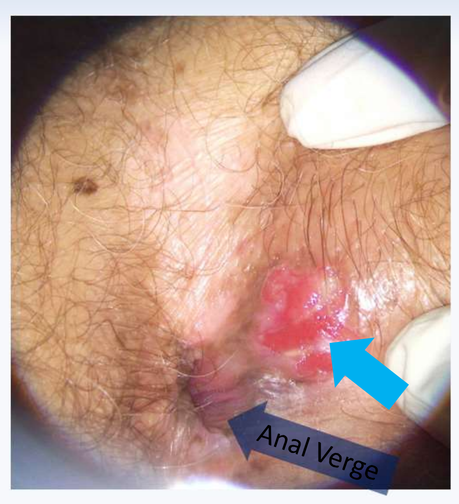
Lymphogranuloma Venereum (LGV)

- Chlamydia Trachomatis serovars L1, L2, L3
- Inguinal/femoral lymphadenopathy
- +/- anogenital ulceration & severe proctitis
- **Clinical diagnosis,** specific diagnostic testing not widely available
- Treatment: Doxycyline 100mg BID x days
  - Partners treated with 1g azithromycin



CDC

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Case 2

Test	Result	Reference Range
TPPA/RPR	Non-Reactive	Non-Reactive
Rectal gc NAAT	Negative	Negative
Rectal Ct NAAT	Negative	Negative
HSV PCV	Negative	Negative

Patient remains steadily symptomatic 7 days later

He has been abstinent, and his partner was treated

“Something Else”

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Case 3

A 25-year-old female (AFAB, endosex, “she” series) presents c/o of severe anal pain and bleeding with bowel movements x 2 wks

- She is not sure what caused it
- BM have been normal
- No history of anal fissure, hemorrhoids, or other anorectal pathology
- Engaged in RAI 6 weeks prior, condom was used

PE reveals

1 2 3

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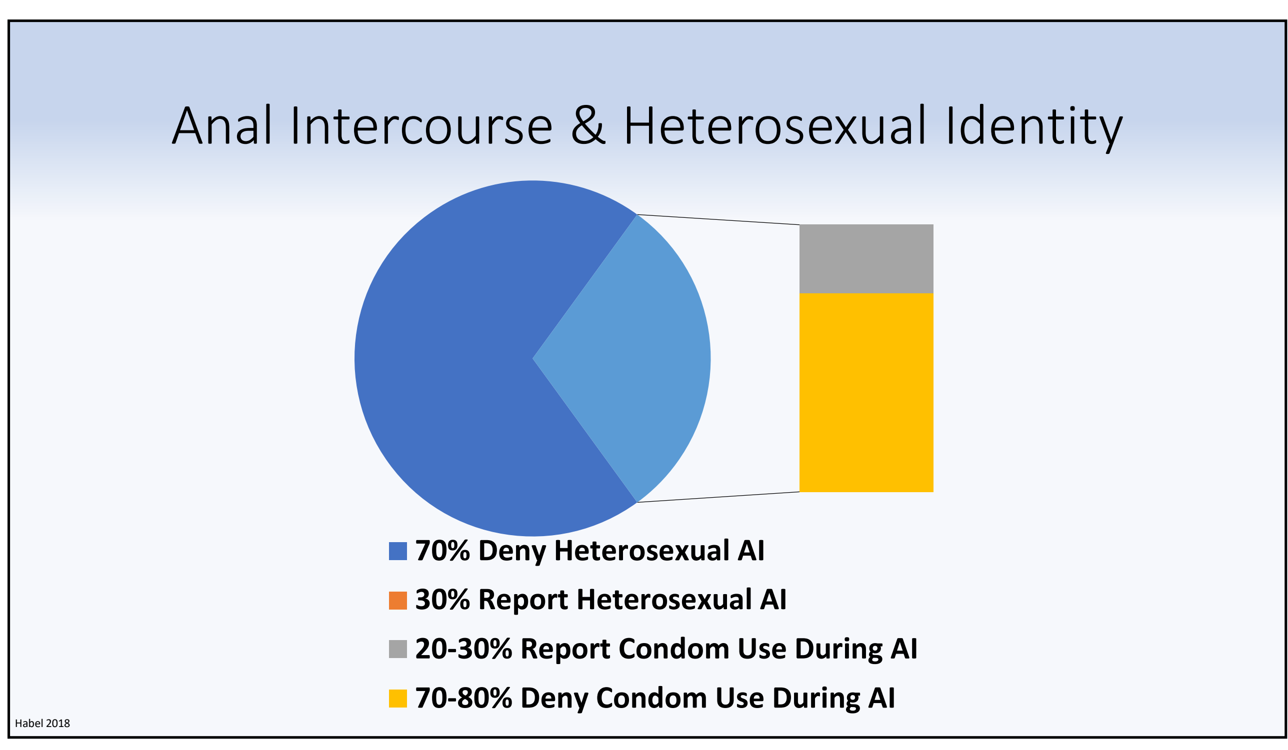

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HIV Acquisition Risk

Estimated Per-Act Probability of Acquiring HIV from an Infected Source, by Exposure Act

Type of Sexual Exposure	Risk per 10,000 Exposures
Receptive anal intercourse	138
Receptive penile-vaginal intercourse	8
Insertive anal intercourse	11
Insertive penile-vaginal intercourse	4
Oral intercourse	low

CDC 2015

Case 3

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- No history of anal fissure, hemorrhoids, or other anorectal pathology
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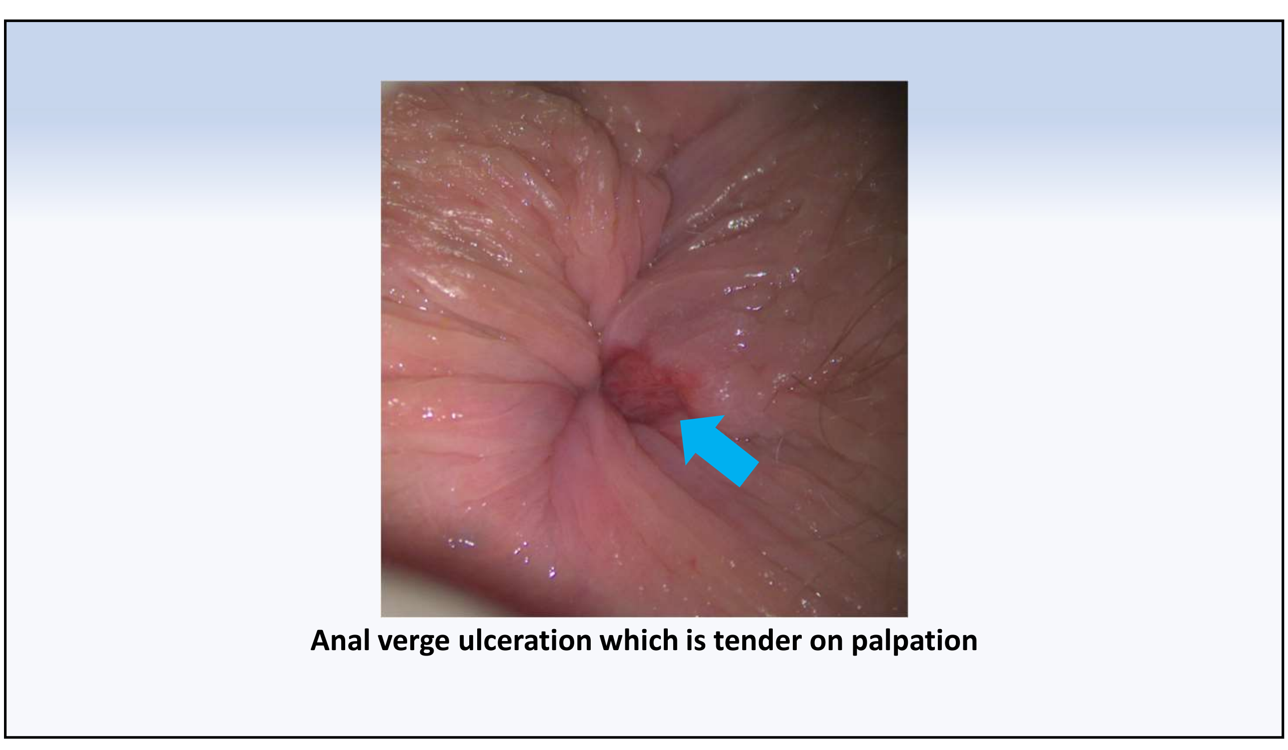
Anal verge ulceration which is tender on palpation

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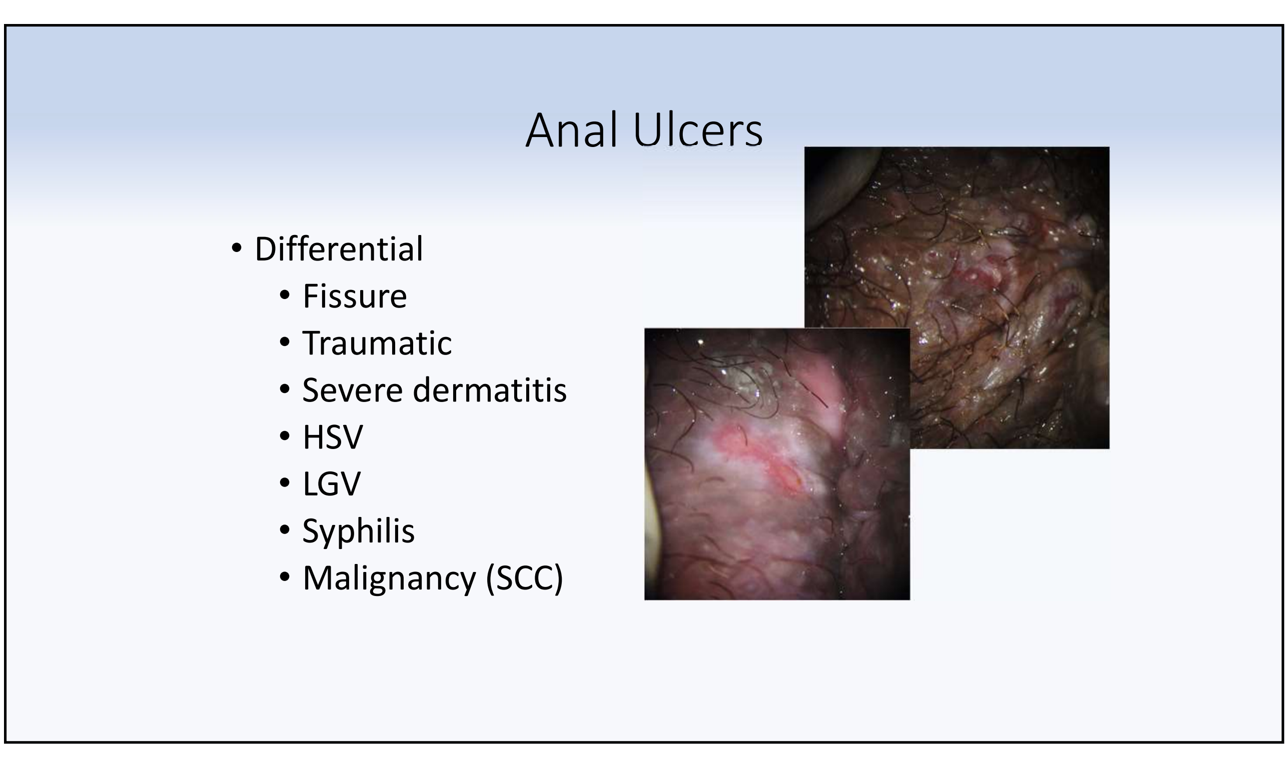

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Case 3

What testing and initial treatment should be offered to this patient?

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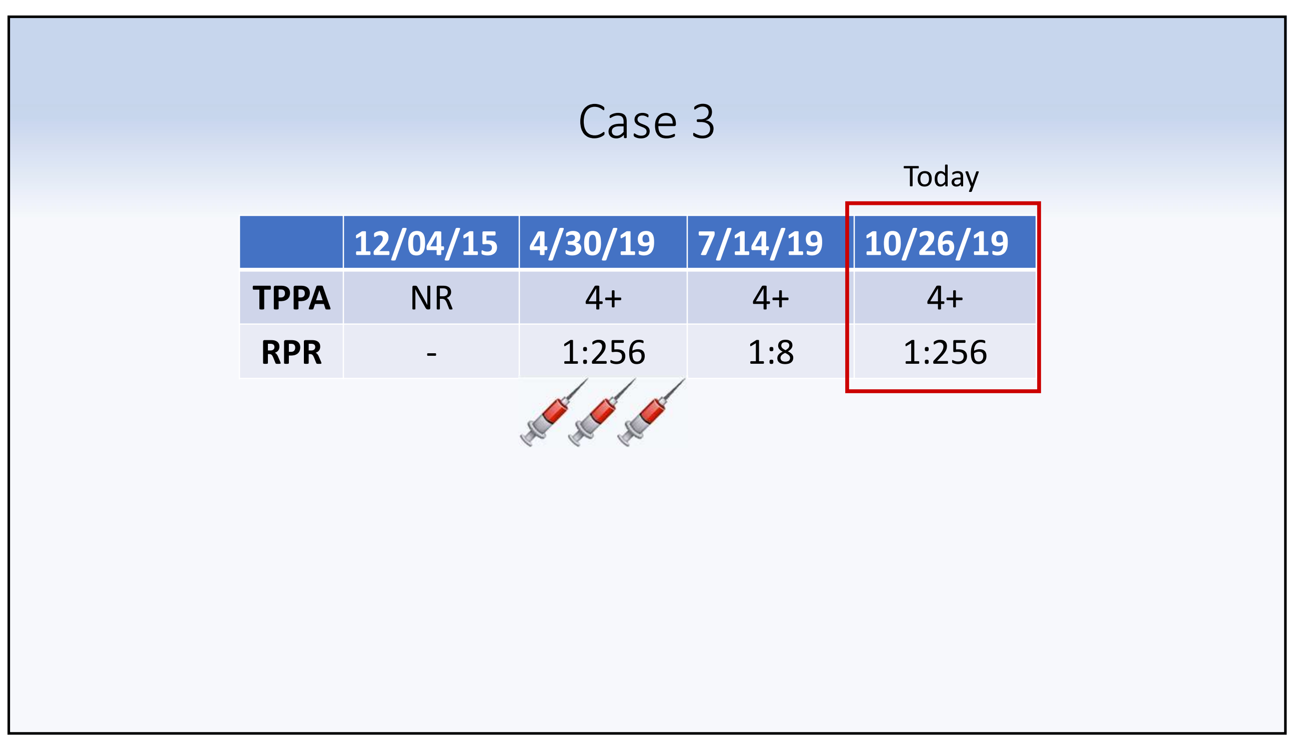
Case 3

Test	Result	Reference Range
TPPA/RPR	**TPPA+ 1:256**	Non-Reactive
Rectal gc NAAT	Negative	Negative
Rectal Ct NAAT	Negative	Negative
HSV PCR	Negative	Negative

How should this patient be treated?



	12/04/15	4/30/19	7/14/19	10/26/19
TPPA	NR	4+	4+	4+
RPR	-	1:256	1:8	1:256

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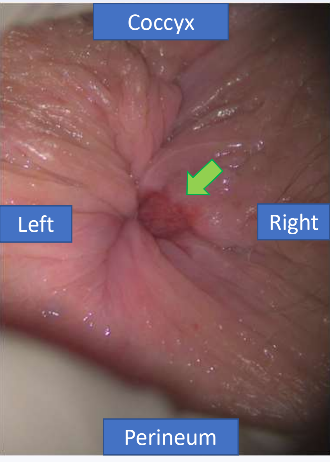
Syphilis

- 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



CDC

Syphilis Reverse Sequence Testing

- Treponema Pallidum 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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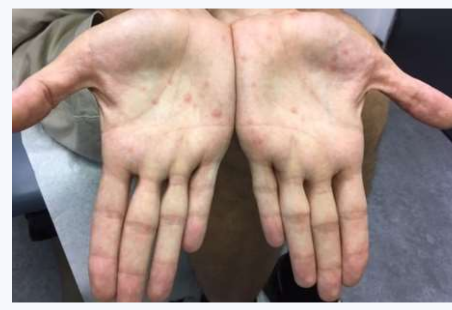
Syphilis Management

- "Significant change" 2-fold change in titer
  - 1:2 → 1:8 = think new infection
- Cure is a 4-fold decrease in titer @ 6 months
  - 1:64 → 1:2 = resolved infection
- Inter- intra- lab variability
- Rx: Benzathine PCN 2.4 million U IM
  - 1 dose: 1° or 2° infection, infection less than 1 yr
  - 3 dose: late latent infection. >12 months
- IV PCN G if neuro involvement



CDC

Case 3

This patient's history shows recurrent STIs:

- 12/30/18 Genital gonorrhea
- 4/30/19 Syphilis (stage unknown)
- 6/28/19 Rectal Ct, oral Ct
- 8/1/19 Oral gc
- 10/26/19 Primary Syphilis

STI Prophylaxis

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

- Doxycycline 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 Chlamydia

Doxycycline for STI prophylaxis is OFF-LABEL

Bolan 2015, Molina 2017 (CROI2017)

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Case 4

- A 44-year-old male (AMAB, endosex, “He” pronouns) c/o pimple on his penis which won’t go away
- The lesion has been present 3 weeks and is painless
- He reports being sexually active with his wife

What is Wrong with this Sexual History?

1. **It is NOT a sexual history**
2. What sexual behaviors does he engage in?
3. What is his relationship structure? (i.e. monogamy)
4. Regardless of relationship structure, does he have other partners?

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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

Is counselling on safer sex effective?

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

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

Focus on **behaviors**

Case 4

- A 44-year-old male (AMAB, endosex, “He” pronouns) c/o pimple on his penis which won’t go away
- The lesion has been present 3 weeks and is painless
- He reports being sexually active only with his wife

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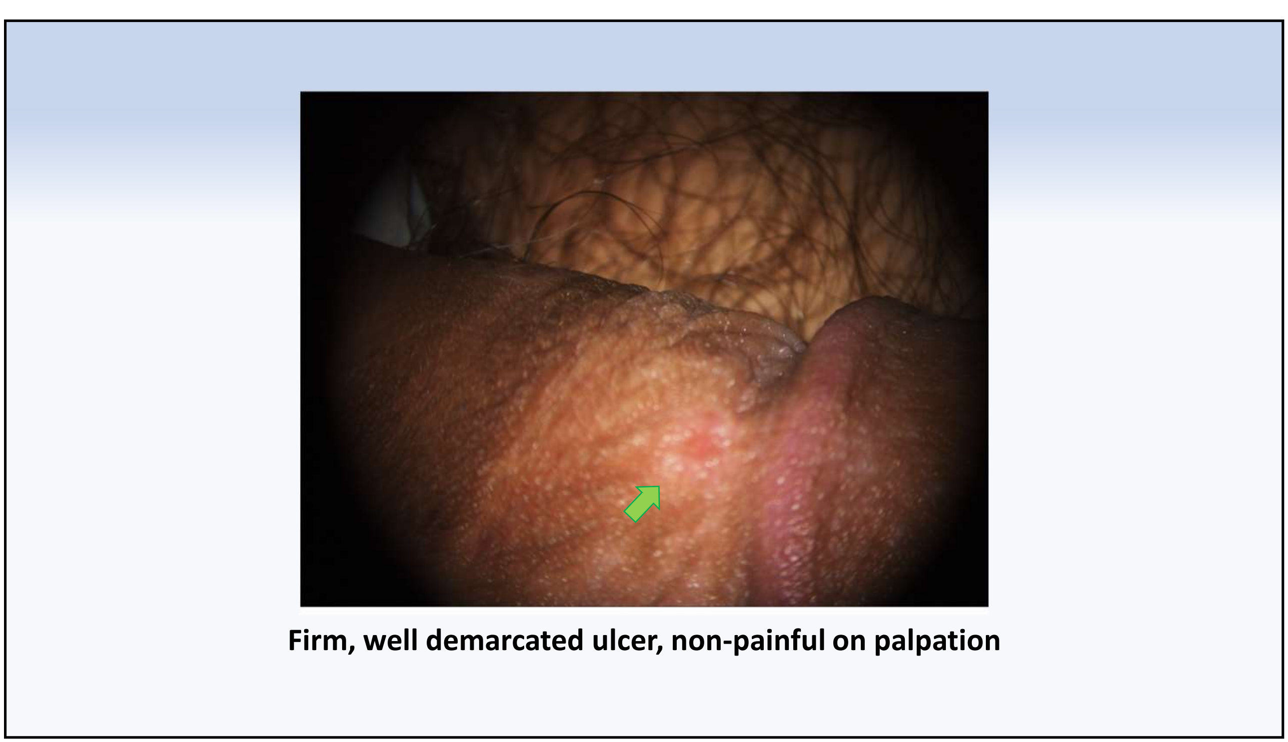

Firm, well demarcated ulcer, non-painful on palpation

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Case 4

Further examination and sexual history taking reveals

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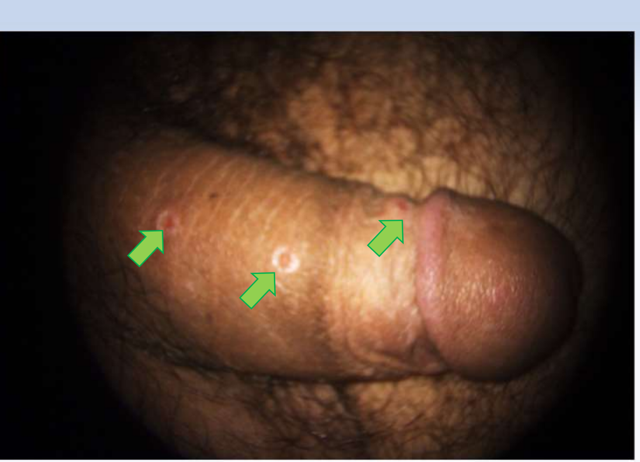

3 firm, well demarcated ulcer, non-painful on palpation

Patient admits to engaging in penile-vaginal sex (condomless) with a commercial sex worker while travelling for business

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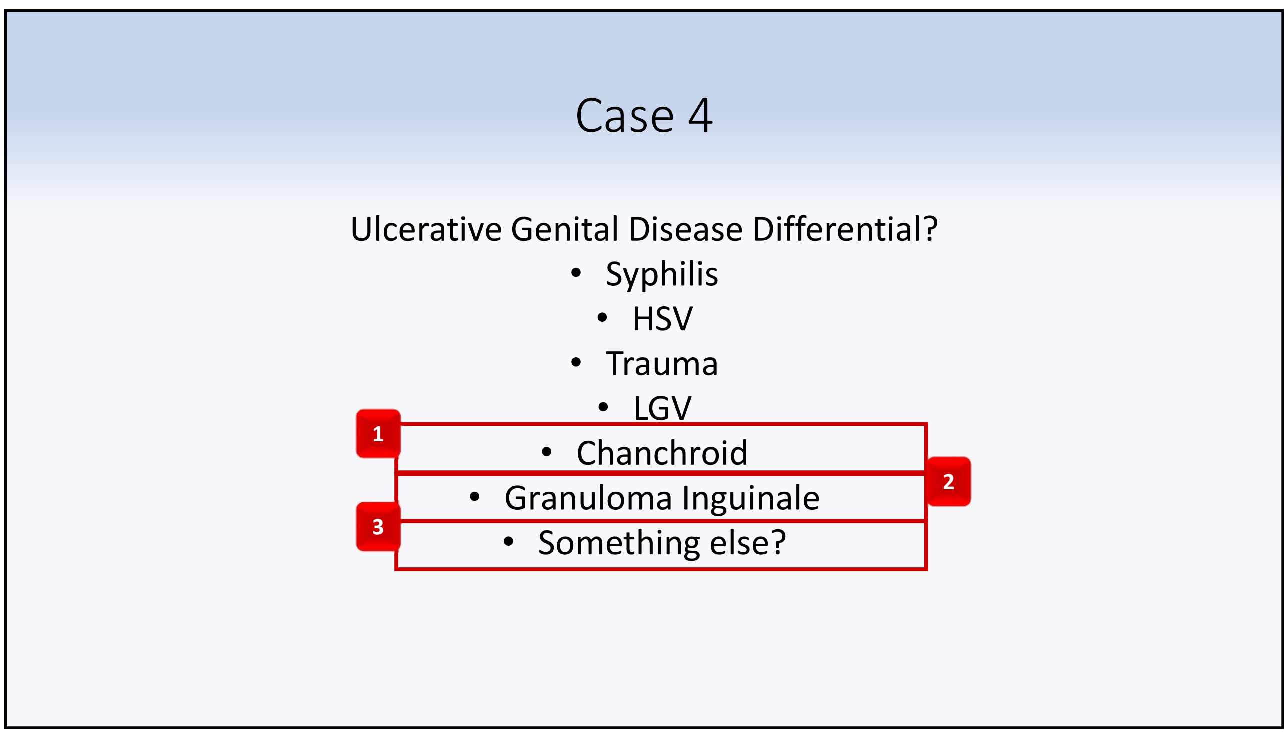

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Chancroid

- 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*

CDC

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Case 4

Test	Result	Reference Range
TPPA/RPR	Non-Reactive	Non-Reactive
Genital gc NAAT	Negative	Negative
Genital Ct NAAT	Negative	Negative
HSV PCR	Negative	Negative
Tissue Pathology	*Patient refused biopsy*	

Treated empirically

- 100mg doxcycline BID x 21 days
- 1g azithromycin

Case 4

- 2 weeks later: lesions unresolved and RPR 1:2
- Treated with PCN and continued course of doxycycline for 21 days

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Diagnosis

- Atypical syphilis?
- Syphilis + Granuloma inguinale?
- Syphilis + Chancroid?
- Syphilis + Granuloma inguinale + Chancroid?

Case 5

A 24-year-old patient c/o painful burning blisters on penis x 3d

- Reports malaise, fever, and myalgias on ROS
- No history of similar lesion
- 101°F oral temperature

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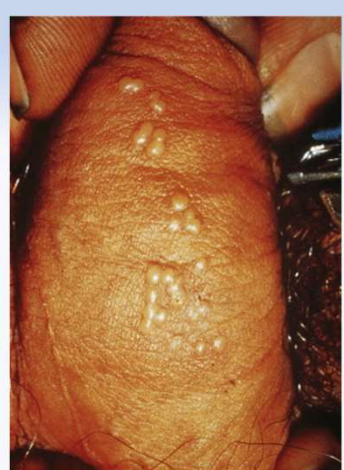

Scattered vesicles on an erythematous base, exquisitely painful on palpation

Genital herpes Medicine. Patel, Raj.. Published June 1, 2010.
Volume 38, Issue 6. Pages 276-280. © 2010.
Figure 3 Herpetic vesicles in a man with genital herpes.

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HSV Diagnosis

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

CDC

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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

CDC

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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

CDC

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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.

CDC

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Recurrent Treatment (within 72 hrs)

Drug	Dose	Frequency	Duration
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

CDC

Case 5

After symptoms resolve the patient asks to start daily prophylaxis

Patient cites severity of the primary HSV infection &
potential frequency of HSV2 recurrence during the first year

While on prophylaxis a similar episode occurs

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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

CDC

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Case 5

A 24-year-old patient c/o painful burning blisters on penis x 3d

- Reports malaise, fever, and myalgias on ROS
- No history of similar lesion
- 101°F oral temperature

What history is missing?

CDC

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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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Case 5

A 24-year-old female patient (AMAB, endosex)

Pronouns: She/Her/Hers and Queen

- c/o painful burning blisters on penis x 3d
- Reports malaise, fever, and myalgias on ROS
- No history of similar lesion
- 101°F oral temperature

CDC

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Case 6

A 36-year-old two-spirit patient (AMAB, endosex, any pronouns) c/o anal discharge, itch, and bleeding x 2 wks

- Tried fiber supplement but developed abdominal cramping & bloating, discontinued after a few days
- Tried OTC hemorrhoid medication with mild effect
- Admits to condomless AI 2 weeks prior to the onset
- No known exposure to STIs but asks for gc/Ct treatment?

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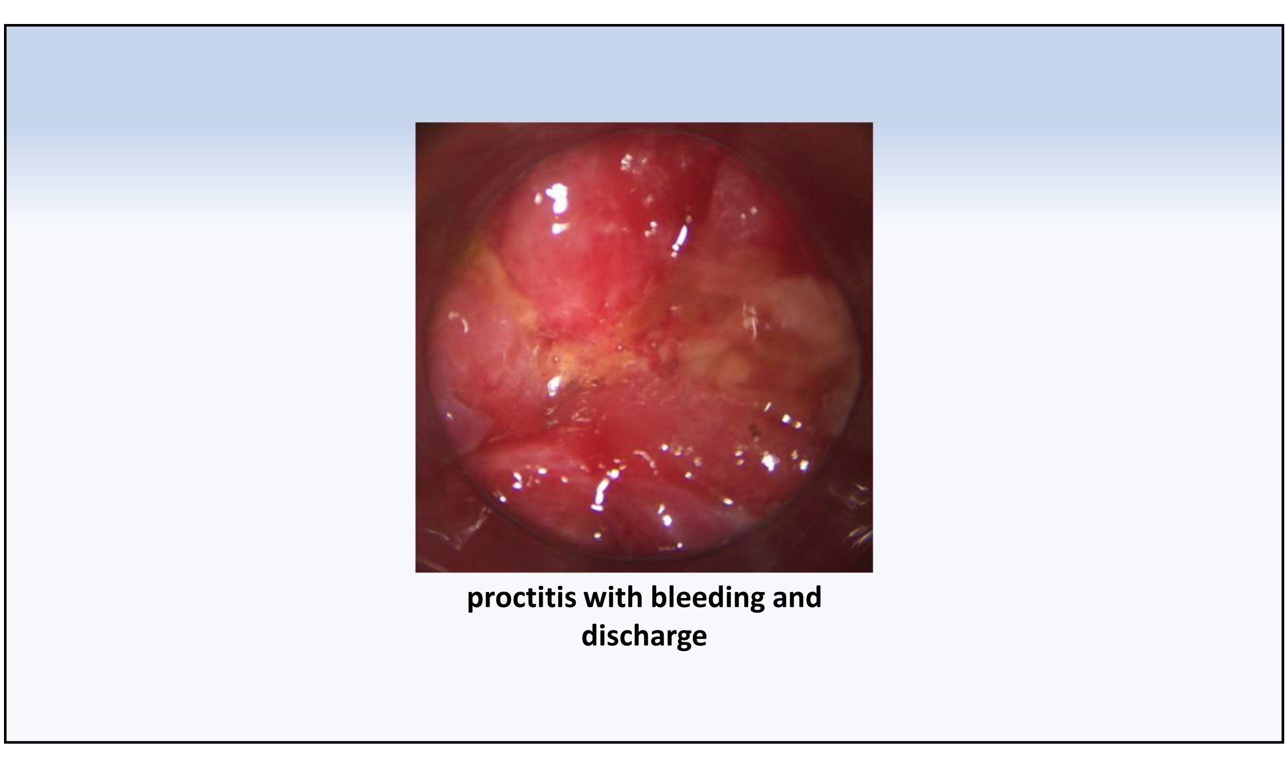

proctitis with bleeding and discharge

66

Case 6

- Empirically treat
  - 250 mg ceftriaxone IM once
  - 100 mg doxycycline BID x 21 d
  - 1g valacyclovir BID x 10 days
- No improvement after 7 days
- Bloating and cramping have worsened since d/c the fiber
- The discharge is more like diarrhea
- Sexual history reveals that the patient engaged in oral-anal intercourse 4 wks prior to the onset of symptoms

Test	Result	Ref Range
TPPA/RPR	NR	Non-Reactive
Rectal gc NAAT	Negative	Negative
Rectal Ct NAAT	Negative	Negative
HSV PCR	Negative	Negative

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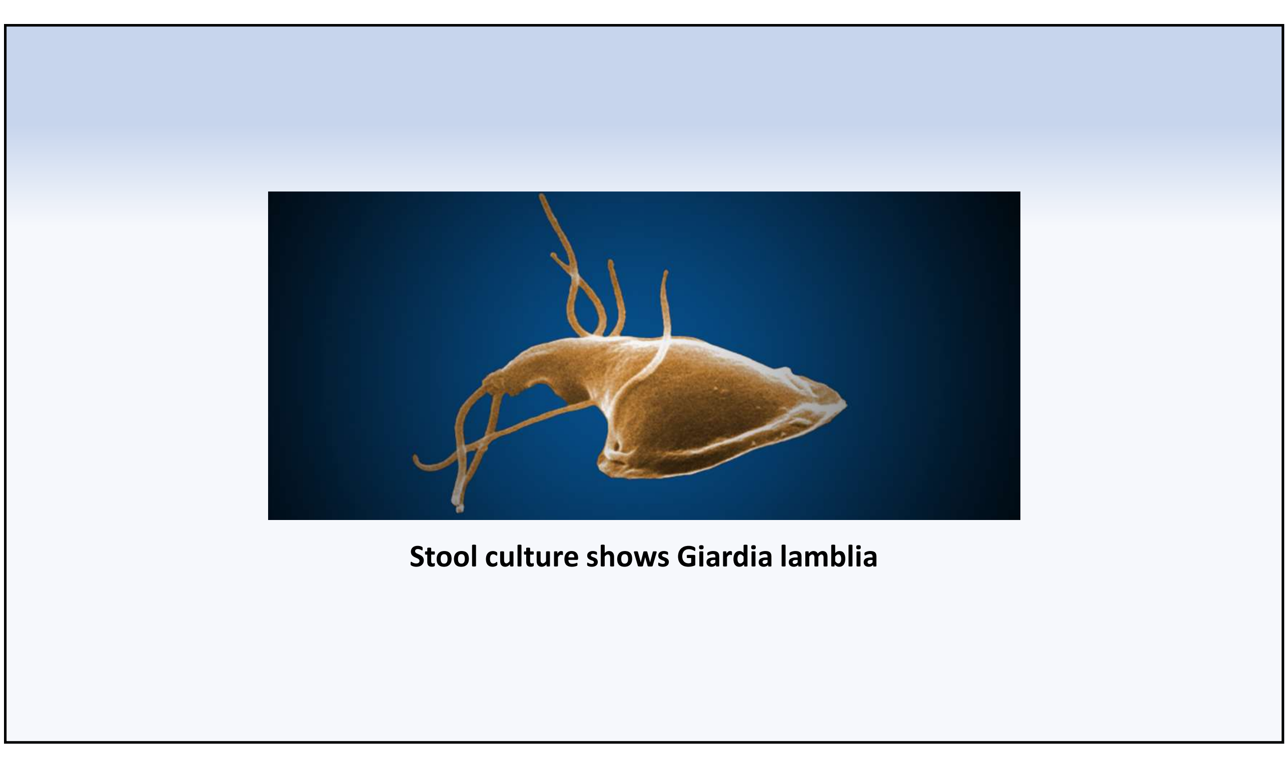

Stool culture shows Giardia lamblia

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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)

CDC

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Case 6

What vaccination is especially important for this patient?

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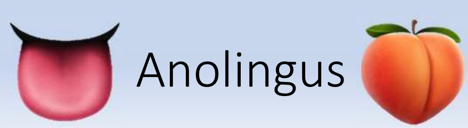

- Hepatitis A
  - Oral-fecal transmission
  - HAV vaccination recommended for MSM***
  - Supportive management
  - 10-15% relapse in 6 months
  - PEP with vaccine or immunoglobulin

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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Citations

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