Controversies in Managing Sexually Transmitted Infections: A Case-Based Panel Discussion

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Financial Relationships With Ineligible Companies (Formerly Described as Commercial Interests by the ACCME) Within the Last 2 Years:

Dr Lennox has received payment for clinical trials from ViiV Healthcare. (Updated 03/31/22)

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Learning Objectives

After attending this presentation, learners will be able to:

- Choose appropriate testing and treatment for syphilis in those with HIV
- Prescribe the best treatment for MSM with symptomatic chlamydia proctitis
- Apply the 2021 United States Preventive Services Task Force recommendations for appropriate GC/Chlamydia screening in women

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Case 1

- 25-year-old male with HIV infection, and poor adherence to ART, presents to clinic for evaluation of a penile lesion
- Exam shows a typical chancre of 1° syphilis
- No prior history of syphilis
- No neurologic, ocular or otic symptoms
- The lab subsequently reports RPR 1:256
- Recent CD4 325, HIV RNA 6,100 c/mL

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The patient is not allergic to any medications. Which one of the following is recommended by the CDC STI treatment guidelines panel?

ⓘ Start presenting to display the poll results on this slide.

Excerpts from the STI Guidelines

"CSF evaluation is warranted for persons with clinical signs of neurosyphilis"

"Persons with HIV infection and primary or secondary syphilis should be evaluated…serologically…at **3**, 6, 9,12 and 24 months…"

"Available data demonstrates that additional doses of Benz PG… do not result in enhanced efficacy..." (over single dose)

"All persons with HIV infection and primary and secondary syphilis should have a thorough neurologic, ocular, and otic examination"

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Case 1 - Continued

- At 3 months after treatment the RPR decreased from 1:256 to 1:128
- At 6 and 12 months after treatment RPR remained at 1:128
- The patient denies any sexual exposures

Questions:

a) Has treatment failed?
b) Should he be retreated?
c) If retreated, with 1 or 3 weekly doses of Benz PG?
d) What about Azithromycin 2g x1 dose?

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Excerpts from the STI Guidelines

"….10- 20% of persons with 1° or 2°… will not achieve the fourfold decrease… within 12 months…" "These persons should receive additional neurological examinations, clinical and serologic follow-up annually."

"If additional follow-up cannot be ensured, retreatment… weekly injections Benz PG… for 3 weeks is recommended."

"Among persons with no neurologic findings… and who are sexually active, reinfection is likely and repeat treatment for early syphilis is recommended."

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Case 1 - Continued

- For the 12-month follow-up the lab issues a corrected value for RPR of 1:512, not 1:128 as reported

Questions:

a) Any change in diagnostic approach?
b) What treatment to use?

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Case 2

- 29-year-old woman with HIV suppressed on ART becomes pregnant. Prenatal labs + Trep IgG and + RPR 1:64. Neurologic and physical exam shows no signs of 1°, 2° or 3° syphilis
- Last Trep IgG and RPR negative 3 years prior, now diagnosed with late latent syphilis
- Gestational age based on LMP is 10 weeks

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Case 2 - Continued

- 4 years prior the patient had anaphylaxis when given amoxicillin for a URI

Questions – Which of the following treatments would you consider, and why?

A. Doxycycline 100mg BID or Tetracycline 500mg QID for 28 days
B. Ceftriaxone 1–2g IM daily for 28 days
C. Desensitization, then Amoxicillin 3g QD + Probenecid 750mg QD for 28 days
D. Desensitization, then Benzathine PenG 2.4 MU x 3 weeks

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Which of the following treatments would you consider, and why?

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Drug Costs of Regimens

Average Wholesale Price

Drug Regimen	Price
Doxycycline	$312
Tetracycline	$1,764
Amox + Probenecid	$120
Benz PenG	$1,400

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Sex Wars – Return of the Treponemes

- 6 years have passed. The patient in Case #1 is now 31 and has had 4 re-infections with syphilis. He is ART adherent with a suppressed HIV RNA.
- Not monogamous, rarely uses condoms (U=U).
- Would you?

A. Continue PRN Benzathine pen G
B. Doxycycline PREP
C. Doxycycline PEP
D. Some other approach?

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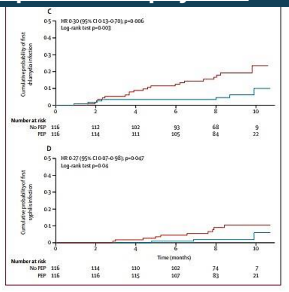
Would you?

ⓘ Start presenting to display the poll results on this slide.

Doxycycline as Post-Exposure Prophylaxis

- Open label extension of the IPERGAY HIV PrEP study, randomized to Doxycycline 200mg PEP vs. no treatment
- 232 men followed in ~ 9 months
- A randomized trial of 200mg Doxy PEP is ongoing



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Molina JM. Lancet HIV 2018

Doxycycline as Pre-Exposure Prophylaxis

- Pilot study of 30 MSM with ≥ 2 prior syphilis, randomized to Doxycycline 100mg QD vs. cash incentives

Results of Generalized Linear Mixed Models for Sexually Transmitted Diseases (n=30).[†]

	Number of Visits with Outcome		Follow-Up Analysis (thru 48 Weeks)		On-Drug Analysis (thru 36 Weeks)	
Outcome	Doxy Arm	CM Arm	p-value	OR (95% CI)	p-value	OR (95% CI)
STI Contraction						
Gonorrhea or Chlamydia Only	4	8	0.18	0.36 (0.08-1.56)	0.25	0.42 (0.09-1.89)
Syphilis Only	2	7	0.10	0.24 (0.04-1.33)	0.16	0.27 (0.04-1.73)
Any STD (Gonorrhea, Chlamydia, Syphilis or any combination thereof)	6	15	0.02	0.27 (0.09-0.83)	0.07	0.30 (0.08-1.09)

[†] Odds ratios (OR) or Rate ratios (RR) below 1 indicate the decreased odds/rates in the Doxycycline arm compared to Contingency Management (CM) arm; OR or RR above 1 indicate increased odds/rates in the Doxy arm compared to the CM arm

Bolan et al.

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Case 3

- 22-year-old MSM presents with tenesmus and rectal discharge following unprotected receptive intercourse. NAAT testing is positive for Chlamydia.
- For how long should he be given Doxycycline?
- 7 days, 14 days, 21 days?
- Or should he receive Azithromycin 1g x 1?

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Azithromycin vs. Doxycline for Asymptomatic Chlamydia

- Double blind trial in 625 MSM[1]
- Azithromycin 1g SD vs. Doxycycline 100mg BID x 7 days
- 4-week microbiologic cure:

	Doxy	Azithro	p
mITT Analysis	97%	76%	<0.02

- In a prospective observational study of women treated for chlamydia, those with rectal chlamydia had 96% cure with Doxycycline and 78% Azithromycin[2]

1. Lai A. NEJM 2021. 2. Duhers N. CID 2019

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Case 3 - Continued

- The patient received a Doxycycline prescription, and asked if he could also have a prescription for his most recent contact
- Is Expedited Partner Therapy indicated for partners of MSM?
- Should any other persons with whom he was intimate in the last 60 days also be evaluated, or should they be treated presumptively?

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Case 5

- 28-year-old female is seen by her primary physician. Has not had a clinic appointment in 4 years. Has a male partner of 2 years and a female partner intermittently for ~ 6 years
- She believes that both are monogamous with her
- Was screened for HIV and Chlamydia at age 24 and all negative. She is asymptomatic.

Does she qualify for G.C./Chlamydia screening according to the USPSTF 2021 recommendation?

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USPSTF: Screening for GC & Chlamydia in Women

Population	Recommendation	Grade
Sexually active women, including pregnant persons	The USPSTF recommends screening for chlamydia in all sexually active women 24 years or younger and in women 25 years or older who are at increased risk for infection.	B
Sexually active women, including pregnant persons	The USPSTF recommends screening for gonorrhea in all sexually active women 24 years or younger and in women 25 years or older who are at increased risk for infection.	B
Sexually active men	The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of screening for chlamydia and gonorrhea in men.	I

Assess risk:

- Women aged 15 to 24 y have the highest infection rates.
- Women 25 years or older are at increased risk if they have
  - A previous or coexisting STI
  - A new or more than 1 sex partner
  - A sex partner having sex with other partners at the same time
  - A sex partner with an STI
  - Inconsistent condom use when not in a mutually monogamous relationship
  - A history of exchanging sex for money or drugs
  - A history of incarceration

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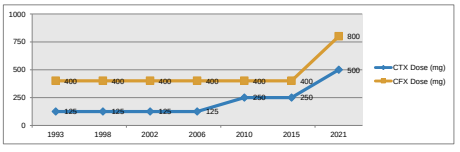
Dosing of Ceftriaxone or Cefixime for G.C. of Cervix, Urethra and Rectum by Year of STI Guideline



- Will further dose escalation in Ceftriaxone be needed soon?
- Should oral Cefixime be used at all, or should I.M. Gentamicin or another cephalosporin be given if Ceftriaxone not available?

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Question-and-Answer Session