NORTHWEST AIDS EDUCATION AND TRAINING CENTER

Presentation & Management of Syphilis in the Setting of HIV

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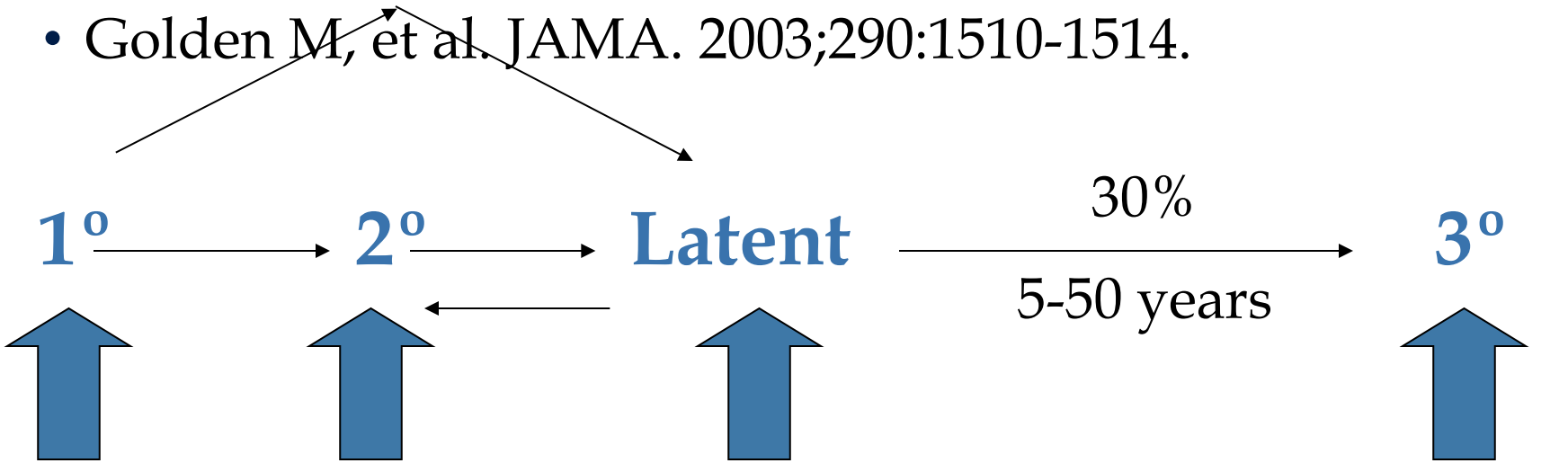
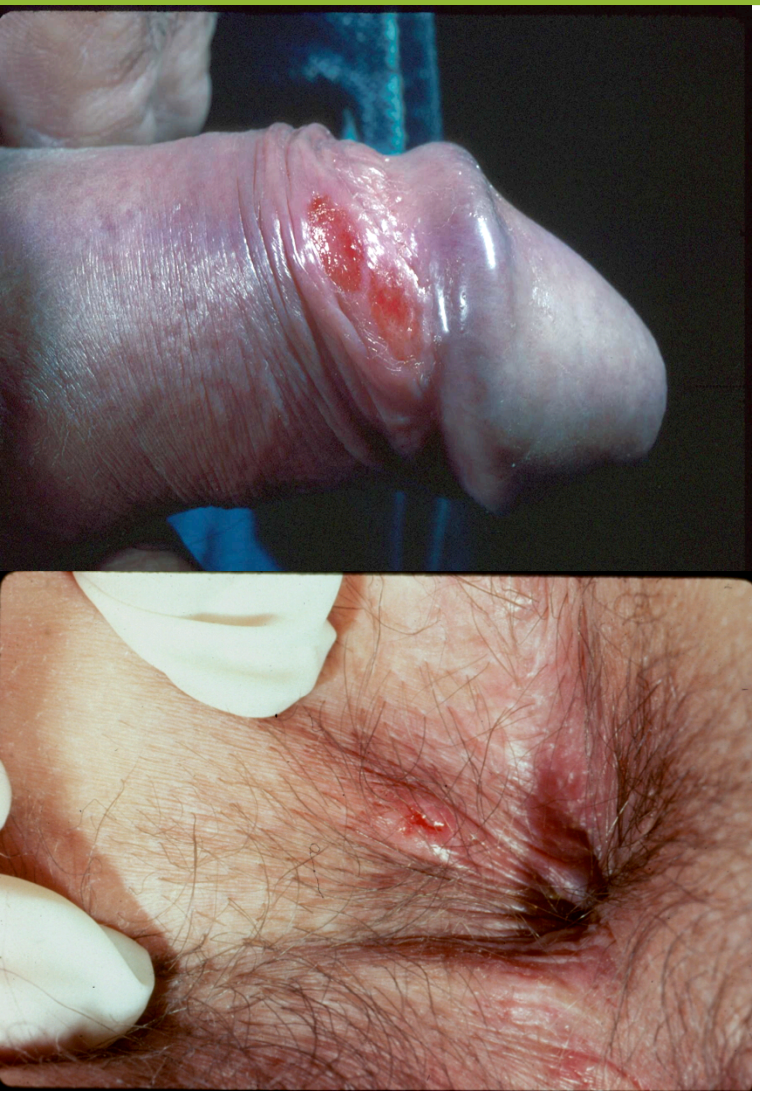
Syphilis: Overview
Stages

- Golden M, et al. JAMA. 2003;290:1510-1514.



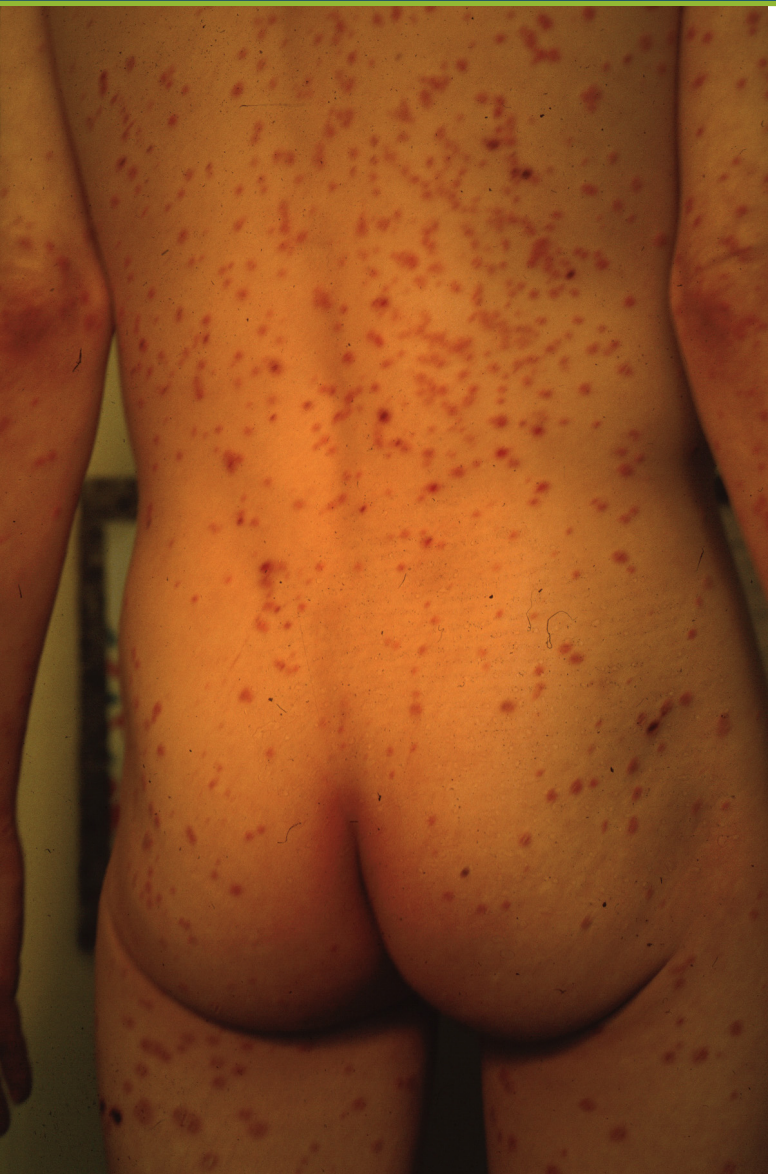
"Early" syphilis if <1 year

Syphilis: Clinical Features
Primary Stage



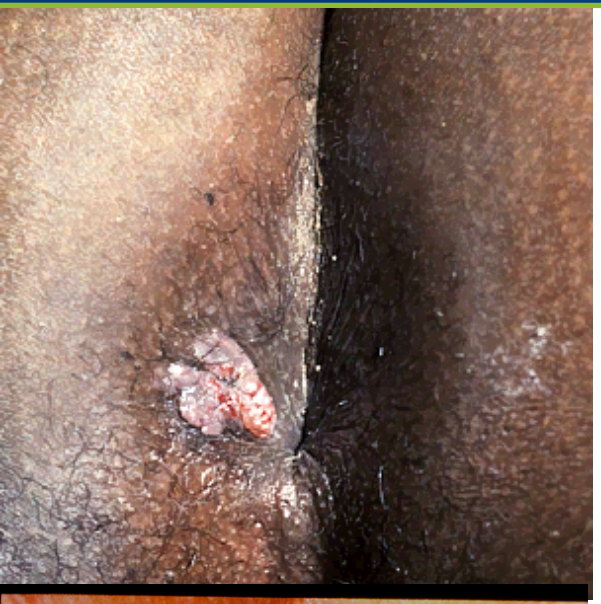
- Chancres can occur anywhere inoculated by direct contact (fingers, mouth)
- Can't rely solely on clinical appearance to make the diagnosis (may be painful/ tender)
- Can present atypically in HIV (purulence, multiple chancres)
- This perianal chancre was mistaken for genital herpes

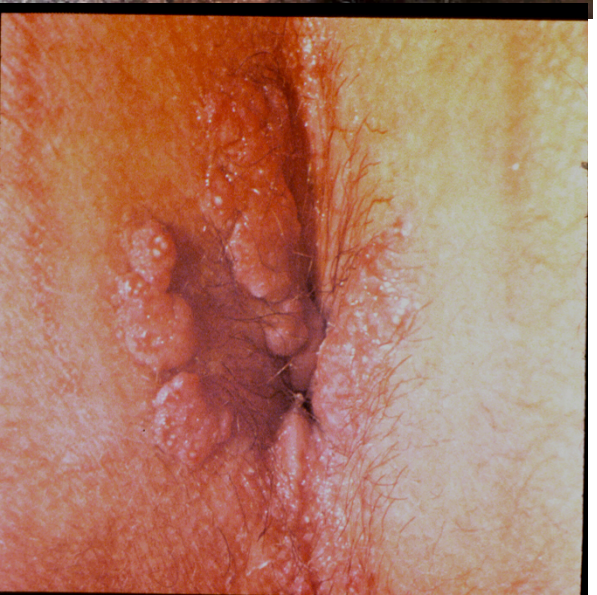
Syphilis:
Secondary Stage



- Generalized rash: macular, papular, pustular
- Condyloma lata
- Mucous patches
- Fever, malaise, generalized lymphadenophathy, alopecia, interstitial keratitis, uveitis, liver/ kidney involvement
- Lasts 2-6 weeks
- 25% have recurrent secondary symptoms

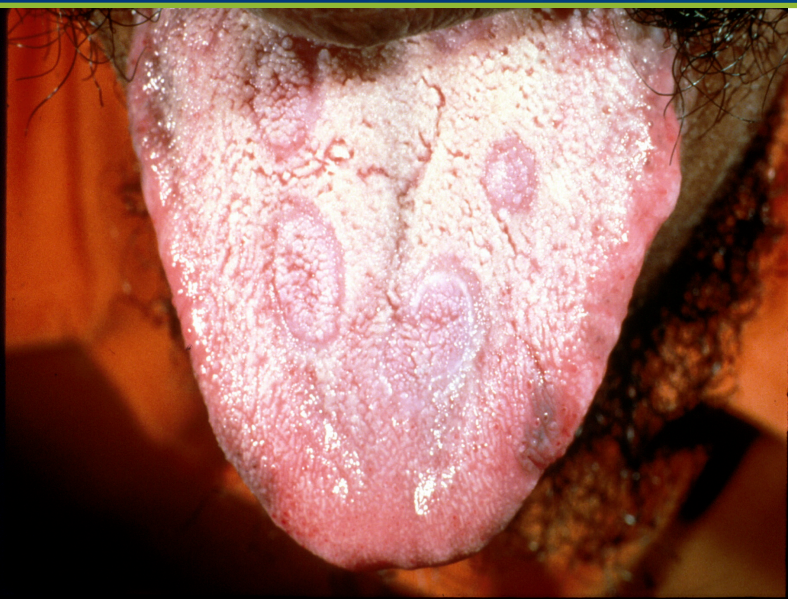
Syphilis:
Secondary Stage

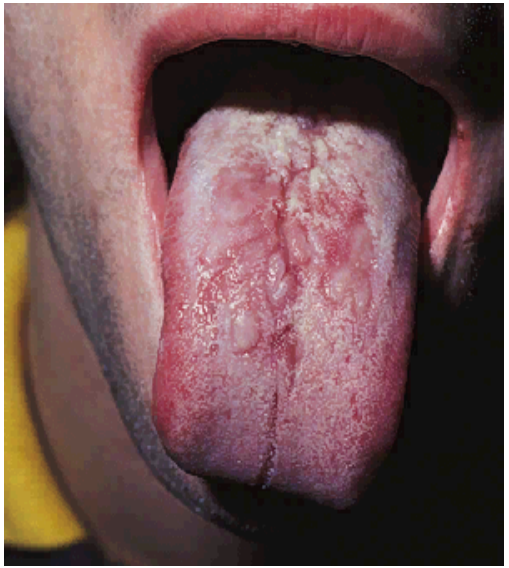




- Condyloma lata
- High numbers of treponemes
- May occur at any moist body site
- Highly contagious
- Fleshy, flat-topped appearance may help distinguish from warts, but often mistaken for latter

Syphilis:
Secondary Stage





- Mucous patches on background of ‘coated’ tongue
- High concentrations of treponemes
- Highly contagious
- RPR+/VDRL+ ~100% in secondary syphilis
- Unfortunately, darkfield on oral lesions not reliable due to presence of non-syphilis oral treponemes (normal)

Neurosyphilis

- Types
  - Meningitis: asymptomatic (abnormal CSF), or chronic or acute meningitis
    - More common in HIV; likelihood increased with low CD4 or high titer
  - Meningovascular: can present as CVA
  - Parenchymatous disease (generalized paresis)
  - Posterior column (tabes dorsalis)
    - Ataxia
    - Lightning pains in legs
    - Charcot's joints
    - Optic nerve degeneration

Syphilis: When to Perform a Lumbar Puncture

- **All** patients who have serological evidence of syphilis and:
  - Neurological symptoms (including ocular or auditory)
  - Evidence of tertiary syphilis
  - Lack of appropriate serological response to therapy

Syphilis: Evaluation of CNS in the HIV-Infected Patient

- CDC 2010 STD Treatment Guidelines www.cdc.gov/std; Marra CM, *Neurology* 2004;63:85-88; Libois A, *Sex Transm Dis* 2007;34:141-144; Ghanem KG, *Clin Infect Dis* 2009;816-821; Marra CM, *Clin Infect Dis* 2008;47:893-899.
  - CNS invasion occurs in early syphilis regardless of HIV or neurologic symptoms (protein, pleocytosis)
  - Clinical significance unknown (HIV+/-)
  - Clinical and CSF consistent with neurosyphilis associated with RPR ≥ 1:32 and/or CD4 ≤350
    - Criteria likely sensitive, but non-specific (many negative LPs)
    - Unless neurologic symptoms present, CSF exam has not been associated with improved clinical outcomes

Lumbar Puncture: Syphilis & HIV

- Three approaches:
  - LP for all HIV+ patients with syphilis, regardless of stage
    - Encouraged in 2006 CDC guidelines, advocated by some experts
  - LP using algorithm based on CD4 and syphilis titer
    - Treat for neurosyphilis if CSF WBC elevated or CSF-VDRL reactive
  - LP only if symptoms/signs indicate CNS involvement*
    - Current CDC guidance

* Requires careful history and examination!

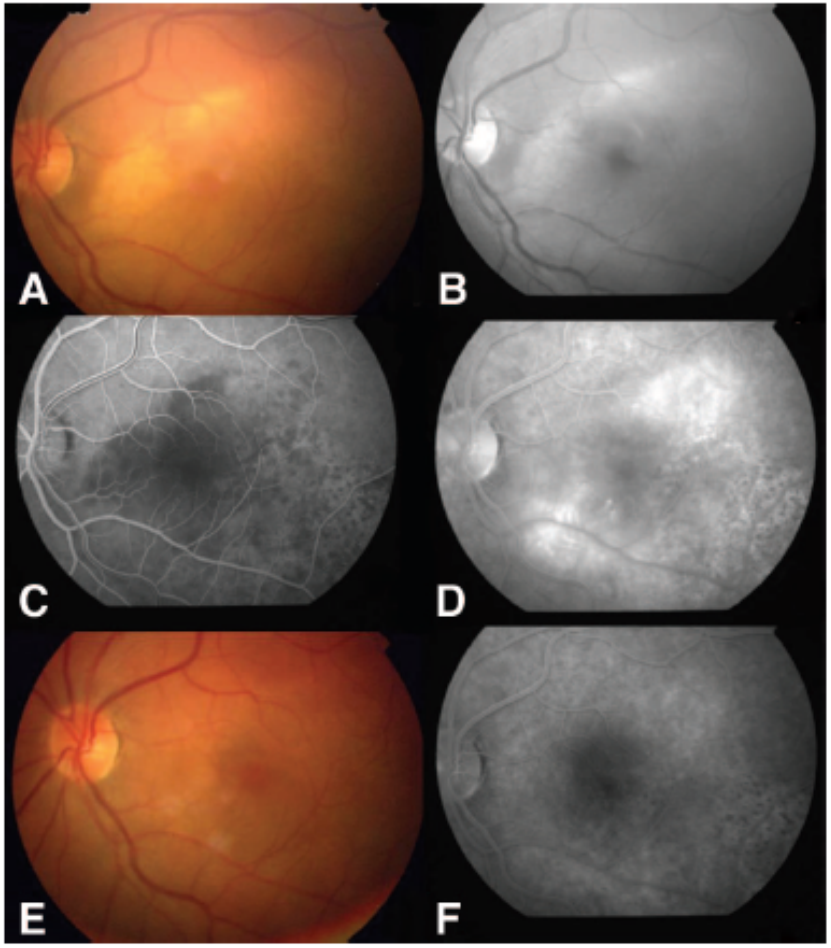


Figure 2. Funduscopy (A) angiography (B, C, D): on admission shows an aspect of acute placoid chorioretinitis. Eight days later, there was a dirty, granitelike fundus (E), angiographic examination (F).

Over 5 years in 509 HIV+ patients in Dijon, France, 3.9% had syphilis and of those, 20% had ocular involvement (retrospective review of inpatients)

- Biotti D, et al. Sex Transm Dis. 2010;37:41-43.

Syphilis Treatment

- Penicillin preferred for all stages
- Early syphilis (primary, secondary, early latent)
  - BZN PCN (L-A) single dose IM 2.4 million units

    Do not use other injectable PCN formulations
    Do not use azithromycin (resistance; treatment failure)
- Late latent
  - BZN PCN (L-A) IM 2.4 million units weekly x 3 doses (7.2 million u total)
- Alternatives: doxycycline, ceftriaxone

- CDC 2010 STD Treatment Guidelines www.cdc.gov/std

Late Latent Syphilis "Acceptable" Alternative Regimen for Adults

- **Doxycycline** 100 mg bid for 28 days
- **Tetracycline** 500 mg qid for 28 days

Neurosyphilis Treatment

- Aqueous PCN G 18-24 million units/day x 10-14 days
- Procaine PCN G 2.4 million units/day PLUS probenecid 500 mg PO qid x 10-14 days
- Ceftriaxone 2 g IV daily x 10-14 days (alternative)

Management of Syphilis & HIV: General Themes

- Have low index of suspicion for neuroinvasive disease and performance of LP; careful neuro history & examination
- Use standard treatment appropriate to stage
- Serologic follow-up more frequent
  - 3, 6, 9, 12, 18 and 24 month follow up serology with quantitative test (RPR or VDRL; use same one consistently)
  - Defining cure: fourfold decline by 6 months; negative by 1 year (ideally)
  - Fourfold decline = 2 titer drop (1:128 to 1:32)

STD Resources

- Seattle STD/HIV Prevention Training Center
  - www.seattlestdhivtraining.org
- National Network of STD/HIV Prevention Training Centers
  - www.stdhivpreventiontraining.org
- CDC Treatment Guidelines
  - www.cdc.gov/std/treatment
- American Social Health Association (ASHA) booklets, books, handouts, the Helper www.ashastd.org **(800) 230-6039**
- ASHA patient herpes hotline **(919) 361-8488**