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Evaluating Patients For Primary Syphilis

Primary Syphilis

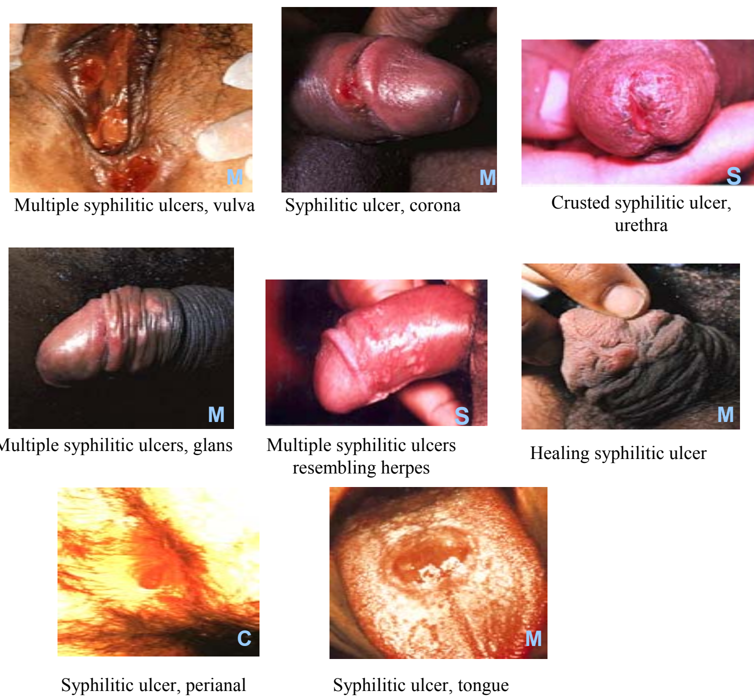
Clinical Presentation

- •Lesion appears 10-90 days after exposure at site of inoculation; persists ~3-6 weeks & then resolves spontaneously
- •Site usually genitorectal but may be extragenital
- •Typical features: single painless, indurated, clean-based ulcer with rolled edges & bilateral painless regional adenopathy
- •~25% present with multiple lesions
- •A painless rectal, vaginal or oral lesion may not be noticed by patient
- •Clinical presentation can mimic herpes & other genital ulcers

Differential Diagnosis

Herpes, chancroid , primary HIV ulcers, lymphogranuloma venereum, granuloma inguinale, trauma and many non-STD causes of genital ulcers.

Variable clinical presentation of primary syphilis



Multiple syphilitic ulcers, vulva; Syphilitic ulcer, corona; Crusted syphilitic ulcer, urethra; Multiple syphilitic ulcers, glans; Multiple syphilitic ulcers resembling herpes; Healing syphilitic ulcer; Syphilitic ulcer, perianal; Syphilitic ulcer, tongue

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C Centers for Disease Control. and Prevention

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Patient with new genital ulcer or suspicious genital lesion

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Sexual history, risk assessment & physical exam*

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- •Darkfield or Direct flourescent antibody-*T. pallidum* (DFA-TP) (if available)
- •Non-treponemal serology test (RPR or VDRL)
- •Treponemal test (TP-PA or FTA-ABS) to confirm reactive RPR or VDRL
- •Herpes culture Consider chancroid test [1]
- •Consider risk based HIV/STD testing

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Darkfield †or DFA-TP

- **Positive** → PrimarySyphilis[2,3,4] Treat‡& Report§
- **Negative or Not available** → Positive Risk Factors or high clinical suspicion? [5]
  - **YES** → Treat‡ for Presumptive Primary Syphilis [2,3,4,5]& Report§
  - **NO** → Wait for serology results → RPR/VDRL: Reactive **
    - **YES** → TP-PA/FTA-ABS: Reactive
      - **YES** → PrimarySyphilis[2,3,4] Treat‡& Report§
      - **NO** → •Repeat VDRL or RPR. If persistently reactive than repeat TP-PA or FTA-ABS •If repeat TP-PA or FTA-ABS is non reactive then biologic false positive[6] •Consider other etiologies (HSV)
    - **NO** → •Repeat RPR or VDRL 2-4 weeks after first visit to rule out syphilis •Consider ordering TP-PA or FTA-ABS •Consider other etiologies (HSV)

§Reporting

- •All syphilis cases or suspected cases must be reported to the local health department within one working day of diagnosis
- •Local health departments can assist in partner tracing & notification

Contact Number at Local Health Department__________________________

*Sexual History, Risk Assessment & Physical Exam

Sexual History, Risk Assessment (past year)

- •gender of partners
- •number of partners (new, anonymous, serodiscordant HIV status)
- •types of sexual exposure
- •condom use
- •recent STDs; HIV serostatus
- •substance abuse
- •HIV risk (men who have sex with men, exchange of sex for money or drugs, injection drug use)

History of syphilis

- •prior syphilis (& last treatment)
- •known contact to an early case of syphilis
- •typical signs or symptoms of syphilis in past year
- •last serologic test for syphilis

Physical Exam

- •oral cavity
- •lymph nodes
- •skin of torso
- •palms &soles
- •neurologic
- •genitalia
- •perianal

Diagnostic Issues

† Darkfield

- •A negative Darkfield or DFA-TP does not exclude the diagnosis of syphilis
- • ~ 80% sensitive, varies with experience/skill of examiner & decreased sensitivity as lesion ages
- •Topical ointments interfere with interpretation

** RPR/VDRL

- •A negative test does not rule out syphilis in early syphilis
- •RPR & VDRL are only ~75-85% sensitive in primary syphilis
- •RPR & VDRL tests should be quantified to the highest titer so that this result can be used to assess treatment response
- •Always use the same testing method (RPR or VDRL) in sequential testing; cannot compare titer from the two tests

‡Treatment of Primary Syphilis

Recommended Regimen

- •Benzathine Penicillin G 2.4 million units

Alternative Regimens for Non-Pregnant Patients who are Penicillin Allergic: close follow-up essential because efficacy not well established

- •Doxycycline 100 mg po bid x 2 weeks *or*
- •Tetracycline 500 mg po qid x 2 weeks *or*
- •Ceftriaxone §§ 1gm IM or IV qd x 8-10 d *or*
- •Azithromycin§§2 gm po

§§ *efficacy in HIV infected persons not studied so use with extreme caution*

Serologic (RPR/VDRL) and clinical follow-up at 6, 12 months (HIV infected-3,6,9,12,24 months) to assess treatment response. Failure of titer to decline fourfold (e.g., 1:16 to 1:4) within 6 months is probably a treatment failure. See reference 4 (CDC) for follow-up information.

*, †,‡ , §, ** see color coded boxes

1. Currently chancroid is very uncommon in the U.S. Consider culture for *Haemophilus ducreyi* if exposure outside of U.S where chancroid is prevalent or if lesion does not respond to syphilis treatment in a patient with negative syphilis serologies.
2. An RPR or VDRL drawn at time of treatment should be used for purposes of follow-up to assess treatment response.
3. All patients who have syphilis should be tested for HIV infection and screened for other STDs. If in an area of high HIV prevalence, repeat HIV testing of patients with primary syphilis 3 months after the first HIV test, if the first test is negative.
4. .See CDC 2002 STD Treatment Guidelines: http://www.cdc.gov/std/treatment/default.htm and CA STD Treatment Guidelines Grid: http://www.stdhivtraining.org/pdf/Txguidln2002923.pdf
5. If the patient is MSM (men who have sex with men) or has high risk sexual behavior (multiple partners, exchange of sex for money or drugs) or clinical exam with classic features of a syphilitic ulcer then presumptive treatment is recommended. Also consider presumptive treatment if patient follow-up is a concern.
6. Biologic false positives can occur from a variety of acute (e.g. hepatitis, post-immunization, varicella) and chronic (e.g. injection drug use, connective tissue disease, malignancy) conditions.

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