### Evaluating Patients For Primary Syphilis

#### SEXUAL HISTORY, RISK ASSESSMENT, & PHYSICAL EXAM

<table>
<thead>
<tr>
<th>Physical Exam</th>
<th>Sexual History, Risk Assessment (past year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral cavity</td>
<td>Gender of partners, number of partners</td>
</tr>
<tr>
<td>Skin</td>
<td>(new, anonymous, seroconvertent HIV status, exchange of sex for drugs or money)</td>
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<tr>
<td>Palms &amp; soles</td>
<td>Types of sexual exposure</td>
</tr>
<tr>
<td>Eyes</td>
<td>Recent STDs, HIV serostatus</td>
</tr>
<tr>
<td></td>
<td>Substance abuse</td>
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<tr>
<td></td>
<td>Condom use</td>
</tr>
<tr>
<td></td>
<td>History of STDs</td>
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<tr>
<td></td>
<td>Prior syphilis (last serologic test &amp; last treatment)</td>
</tr>
</tbody>
</table>

#### DIAGNOSTIC ISSUES IN PRIMARY SYPHILIS

- **Darkfield**: Not sensitive, varies with skill of examiner; decreased sensitivity as lesion ages
- **A negative RPR/VDRL does not exclude syphilis diagnosis**; ~75-85% sensitive in primary syphilis
- **Use same test (RPR or VDRL) in sequential testing; titers are not interchangeable**
- **Need both non-treponemal (RPR or VDRL) and treponemal test (TP:PA, FTA-ABS, EIA, CIA) to make syphilis diagnosis**
- **Treponemal tests can remain positive for life; utility limited in patients with history of prior syphilis; comparison of non-treponemal titers needed**

For more details on Treponemal Immunocassays:
- [www.cdph.ca.gov/Programs/CID/DCDC/CDPH%20Document%20Library/Useof](www.cdph.ca.gov/Programs/CID/DCDC/CDPH%20Document%20Library/Useof)

**Note:** Evaluate for neurosyphilis (assess if neurologic, ophthalmic or otic symptoms present, as neurosyphilis can occur at any stage of syphilis).

#### TREATMENT & FOLLOW-UP

**Recommended Regimen**
- Benzathine Penicillin G 2.4 million units IM x 1

**Alternative Regimens for Penicillin Allergic Non-Pregnant Patients:**
- Efficacy not well established & not studied in HIV+ patients; close follow-up essential
  - Doxycycline 100 mg po bid x 2 weeks or
  - Tetracycline 500 mg po qid x 2 weeks
- Pregnancy with penicillin allergy should be desensitized and treated with penicillin

**See CDC STD Treatment Guidelines:** [www.cdc.gov/std/treatment](www.cdc.gov/std/treatment)


**Additional Testing and Follow-up**
- **Repeat test for HIV, C+T, and pregnancy** (if female of reproductive age)
- **1-2 weeks clinical follow-up**
- **3, 6, 9, 12 months: serologic follow-up for HIV+ patients**
- **6, 12 months: serologic follow-up for HIV- patients**
- **Failure of titer to decline fourfold (e.g., 1640 to 1:816) within 6-12 months from titer at time of treatment may indicate treatment failure. Titer decline may be slower in HIV+ patients**
- **Consider retreatment and CSF evaluation if titer fails to decline appropriately**

#### CLINICAL PRESENTATIONS OF PRIMARY SYPHILIS

- **Lesion appears 10-90 days after contact at site of exposure; may persist for 2-3 weeks then resolves**
- **Usually genital ulcer but may be extragenital, depending on exposure site**
- **Clinical presentation, typical or atypical**
- **Typical: single painless, indurated, clean-based ulcer with rolled edges & bluish pale appearance**
- **Atypical: can mimic herpes & other genital ulcers**
- **>35% present with multiple lesions**
- **Lesions of primary and secondary syphilis can be present at the same time, especially in HIV positive individuals**

#### Differential Diagnosis

- **Herpes (most common), primary HIV ulcers, chancroid, granuloma inguinale, trauma, and many non-STD infectious and non-infectious causes of genital ulcers**
- **More than one etiology can be present at the same time**

#### Diagnostic Work-Up

- **Darkfield** (if available)
- **Stat RPR** (if available)
- **RPR or VDRL serology (quantitative)**
- **Treponemal test** (TP:PA/FTA-ABS/EIA/CIA)
- **Herpes culture or PCR**
- **HIV Test**

**Obtain treponemal and non-treponemal tests at the same time.**

#### Treponemal Tests

- **TP-PA (most sensitive)**
- **FTA-ABS**
- **EIA (Enzyme Immunoassay)**
- **CIA (Chemiluminescent Immunoassay)**

#### Treponemal tests may be more sensitive than non-treponemal tests during primary syphilis.

- **Also consider culture for Haemophilus ducreyi (chancroid) if exposure in endemic areas or if lesion does not respond to syphilis treatment.**
- **All patients with suspected syphilis should be tested for HIV infection and screened for other STDs.**
- **Repeat HIV testing of patients with primary syphilis 3 months after the first HIV test, if the first test is negative.**
- **If the patient is a man who has sex with men (MSM) or has high risk sexual behavior or clinical exam with classic features of a syphilitic ulcer, then standard of care includes presumptive treatment at the time of the initial visit before diagnostic test results are available.**
- **Presumptive treatment is also recommended if patient follow-up is a concern.**
- **If the patient does not respond to treatment, repeat RPR/VDRL after treatment and consider other etiologies.**

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### Sexually Transmitted Diseases (STD) Treatment Guidelines

- For more details, see the online version of the Primary Syphilis Algorithm on the clinical resources page of the CA PTC website: [www.californiaptc.com](www.californiaptc.com)

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**To Order Additional Copies**

See the online version of the Primary Syphilis Algorithm on the clinical resources page of the CA PTC website: [www.californiaptc.com](www.californiaptc.com)

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**Contact Numbers at Local Health Department:**
- [www.cdph.ca.gov/Programs/CID/DCDC/CDPH%20Document%20Library/Useof](www.cdph.ca.gov/Programs/CID/DCDC/CDPH%20Document%20Library/Useof)
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