Co-infection with HIV and early syphilis, by stage of syphilitic infection, 31 areas — U.S., 2012

John R. Su, MD, PhD, MPH, Hillard S. Weinstock, MD, MPH
Division of Sexually Transmitted Disease Prevention, Centers for Disease Control and Prevention, Atlanta, GA, U.S.A.

Background/Objective

- Early diagnosis and treatment of syphilis is desirable
- Syphilis can increase risk of transmitting or acquiring HIV; infected mothers can transmit syphilis to their unborn children

OBJECTIVE

- Describe frequency of co-infection with early syphilis and HIV among men having sex with men (MSM), men having sex with women only (MSW), and women, by stage of infection
- Local epidemiology might vary from data presented here
- Syphilis can increase risk of HIV infection
- HIV status was self-reported
- More health care access for men and women

RESULTS

Cases of early syphilis among MSM and co-infection with HIV, by race/ethnicity and stage of infection

<table>
<thead>
<tr>
<th>Race/ethnicity</th>
<th>Stage</th>
<th>HIV (+) (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>Primary</td>
<td>341 (42%)</td>
</tr>
<tr>
<td></td>
<td>Secondary</td>
<td>1104 (59%)</td>
</tr>
<tr>
<td></td>
<td>Early latent</td>
<td>1340 (66%)</td>
</tr>
<tr>
<td>Black</td>
<td>Primary</td>
<td>229 (5%)</td>
</tr>
<tr>
<td></td>
<td>Secondary</td>
<td>1065 (65%)</td>
</tr>
<tr>
<td></td>
<td>Early latent</td>
<td>1236 (70%)</td>
</tr>
<tr>
<td>Hispanic</td>
<td>Primary</td>
<td>122 (34%)</td>
</tr>
<tr>
<td></td>
<td>Secondary</td>
<td>581 (54%)</td>
</tr>
<tr>
<td></td>
<td>Early latent</td>
<td>959 (62%)</td>
</tr>
<tr>
<td>Other</td>
<td>Primary</td>
<td>22 (25%)</td>
</tr>
<tr>
<td></td>
<td>Secondary</td>
<td>104 (48%)</td>
</tr>
<tr>
<td></td>
<td>Early latent</td>
<td>96 (54%)</td>
</tr>
</tbody>
</table>

Discussion

- Possible explanations for lower co-infection among individuals with primary (vs secondary or early latent) syphilis
- More health-conscious individuals who seek care earlier, and reduce risk before infection with HIV
- Individuals with better access to care who get diagnosed earlier, and reduce risk before infection with HIV
- Individuals who have not engaged in risk behaviors for long, and have had less opportunity to acquire HIV

Limitations

- These data might underestimate actual co-infection among MSM
- Some MSM might be unwilling to disclose MSM behavior, and report being MSM (misclassification)
- HIV status was self-reported, with no test date available. If negative reports were from old test results (e.g., months or years old), these cases might actually be HIV-positive.
- Local epidemiology might vary from data presented here
- State-level data were analyzed. Prevalence of co-infection at the county level might differ from the presented data.

CONCLUSIONS

- High prevalence of co-infection among MSM
- True for all race/ethnicities and age groups; as high as 82% for MSM 40–49 years with early latent syphilis
- Efforts to reduce transmission of syphilis (and co-infection with HIV) should promote earlier detection

Contact Information

John R. Su, M.D., Ph.D., M.P.H., CDC/Division of STD Prevention, 1600 Clifton Road, MS-663, Atlanta, GA 30333, sujr@cdc.gov

National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention
Division of Sexually Transmitted Disease Prevention