Co-Infection with Syphilis Among People Living with HIV in Alameda County, California, 2014-2015

Richard J. Lechtenberg, MPH; Nicholas J. Moss, MD, MPH; Gay Calhoun, MPH; Neena Murgai, PhD, MPH
Alameda County Public Health Department, Oakland, California

Introduction

- Among people living with HIV (PLHIV), co-infection with early syphilis may reflect ongoing risk behavior.
- Particularly for PLHIV with unsuppressed viral loads, such on-going risk behavior may contribute to ongoing transmission of HIV.

Objectives

The objectives of this analysis were to examine:
2. HIV viral suppression among co-infected cases.
3. The number of potential secondary HIV transmissions among co-infected cases.

Methods

- California Reportable Disease Information Exchange (CDIWEB)
- Data Sources, Population, & Exclusions
-Enhanced HIV/AIDS Reporting System (eHADS)
- Deterministic and probabilistic record linkage using Link King
- To capture syphilis infections likely to have occurred after HIV diagnosis, only primary, secondary, or early latent syphilis among residents of Alameda County excluding Berkeley, CA in 2014-2015

Results

Overall, 146 syphilis infections were matched to 144 PLHIV. No co-infections were identified among female PLHIV (n=1,090), and so they were excluded from further transmission of HIV.

Table 1. Co-Infection Among Male PLHIV

<table>
<thead>
<tr>
<th>Race/Ethnicity</th>
<th>Co-Infect.</th>
<th>% Co-Infect.</th>
<th>N %</th>
<th>OR (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>African American</td>
<td>182</td>
<td>16.5%</td>
<td>12</td>
<td>1.5 (0.8-2.9)</td>
</tr>
<tr>
<td>White</td>
<td>1,457</td>
<td>36.6%</td>
<td>47</td>
<td>1.8 (1.2-2.8)</td>
</tr>
<tr>
<td>Latino</td>
<td>1,242</td>
<td>31.5%</td>
<td>31</td>
<td>1.8 (1.2-2.8)</td>
</tr>
<tr>
<td>Asian &amp; Pacific Islander</td>
<td>218</td>
<td>5.5%</td>
<td>14</td>
<td>1.2 (0.8-1.9)</td>
</tr>
<tr>
<td>Other/Race</td>
<td>380</td>
<td>3.6%</td>
<td>16</td>
<td>1.2 (0.8-1.9)</td>
</tr>
</tbody>
</table>

Among male PLHIV, 2.8% were co-infected in 2014-2015; the proportion co-infected was highest among API, those aged 13-39, and MSM. Differences by race/ethnicity, age, and mode of HIV transmission were all statistically significant (Table 1).

Discussion

- Most co-infections among PLHIV were diagnosed at the secondary or early latent stage (Figure 2) and ≥2 years after diagnosis with HIV (Table 2).
- Among co-infected PLHIV, 32 (22.2%) were virally unsuppressed at most recent measurement prior to (or at) syphilis diagnosis (Figure 3).

Conclusions

- Co-infection with early syphilis among PLHIV was limited to males and found to differ by race, age, and HIV transmission category, with the highest burden in Asians & Pacific Islanders, those aged 13-39, and MSM.
- Evidence of being in medical care around the time of co-infection supports the potential of interventions in clinical settings for preventing on-going sexual risk behavior, co-infections, and potential secondary transmission of HIV.
- HIV surveillance data can support tailored prevention interventions to PLHIV with early syphilis infection.

Contact
Richard.Lechtenberg@acgov.org

with questions or comments