Extragenital Chlamydia and Gonorrhea

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Rate of Chlamydia (CT) and Gonorrhea (GC), Clark County, 2012-2016

<table>
<thead>
<tr>
<th>Year</th>
<th>Chlamydia</th>
<th>Gonorrhea</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>431.6</td>
<td>99.0</td>
</tr>
<tr>
<td>2013</td>
<td>458.4</td>
<td>111.5</td>
</tr>
<tr>
<td>2014</td>
<td>490.5</td>
<td>133.6</td>
</tr>
<tr>
<td>2015</td>
<td>481.3</td>
<td>143.0</td>
</tr>
<tr>
<td>2016</td>
<td>551.5</td>
<td>176.2</td>
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Possible Reasons for the Increase

- Better surveillance processes
- Increase in Testing
- Hook-up sites and phone apps (e.g. Grindr, Adam4Adam, Jack’d, etc…)
- Untreated or Undertreated infections
- Missed diseases because all sites of exposures are not being screened.
Urogenital Testing

- Urethra
- Cervix
- Vagina
- Urine
Extragenital Testing

Areas to swab

Pharyngeal

Rectal
**CDC’s Current Recommendations**

- Screen Men who have sex with Men (MSM) who had receptive anal sex within the past year for rectal CT/GC.

- Screen MSM who had receptive oral sex within the past year for pharyngeal GC.

- Test method: Nucleic Acid Amplification Test
Demographics of CT/GC Testing Population, SNHD SHC, 2016

- 9600 people
  - 53% male, 47% female, < 1% transgender
  - 38% hispanic, 26% white, 23% black
  - 48% 20-29 yr olds
  - 59% heterosexual, 22% unknown, 13% MSM
  - 6% HIV+
  - MSM- higher proportion extragenital tests vs. urogenital tests

- 11,363 CT and GC test visits
The Public Health Burden of Extragénital CT/GC

I. Common infections at pharyngeal and rectal sites in MSM

Positivity

<table>
<thead>
<tr>
<th></th>
<th>Published Studies&lt;sup&gt;2-4&lt;/sup&gt;</th>
<th>Our Study</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pharyngeal CT</td>
<td>2-3%</td>
<td>3%</td>
</tr>
<tr>
<td>Rectal CT</td>
<td>7-14%</td>
<td>19%</td>
</tr>
<tr>
<td>Pharyngeal GC</td>
<td>5-11%</td>
<td>13%</td>
</tr>
<tr>
<td>Rectal GC</td>
<td>9-18%</td>
<td>18%</td>
</tr>
</tbody>
</table>
The Public Health Burden of Extragenital CT/GC

2. Rectal CT/GC infections are associated with risk of acquiring HIV infection
   
   ◦ 1 out of 15 MSM diagnosed with HIV 1 year after rectal CT/GC diagnosis\(^5\)
   
   ◦ 8 fold increase with 2 prior rectal CT/GC infection\(^6\)
The Public Health Burden of Extragenital CT/GC

3. HIV positive status is significantly associated to prevalence of rectal CT and GC infections

   ◦ Rectal CT higher among HIV positive MSM than HIV negative MSM

   HIV positive MSM was $2.18 \times$ (95% CI: 1.04-4.60) as likely as HIV negative MSM to acquire rectal CT infection$^7$

   Our study: $1.56 \times$ (95% CI: 1.15-2.11)
The Public Health Burden of Extragenital CT/GC

4. Substantial amount of disease can be missed if extragenital sites are not screened.

   ◦ 13-85% of CT infections and 30-70% of GC infections were found only in extragenital sites in MSM^{2,4,8,9}
Our Study: Potentially Missed Infections

**MSM:**
- 57% of CT infections among MSM
- 48% of GC infections among MSM

**Overall:**
- 12% of all CT infections
- 24% of all GC infections

…would have been missed if only urogenital tests were done!
Proportion of Extragenital GC/CT Infection with Concurrent Urogenital Tests

- **Concurrent negative urogenital test**
- **Concurrent positive urogenital test**

<table>
<thead>
<tr>
<th>Diagnosis</th>
<th>Concurrent Negative</th>
<th>Concurrent Positive</th>
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<tbody>
<tr>
<td>Positive Pharyngeal Chlamydia</td>
<td>79%</td>
<td></td>
</tr>
<tr>
<td>Positive Rectal Chlamydia</td>
<td></td>
<td>87%</td>
</tr>
<tr>
<td>Positive Pharyngeal Gonorrhea</td>
<td></td>
<td>72%</td>
</tr>
<tr>
<td>Positive Rectal Gonorrhea</td>
<td></td>
<td>74%</td>
</tr>
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</table>

Number of extragenital positive tests that had a concurrent urogenital test.
Barriers to Extragenital Testing

- Physicians are uncomfortable taking sexual history
- Extragenital tests are not FDA approved.
OEDS’s Role

- Technical Bulletin

- Focus outreach efforts to advocate for extragenital testing
  - Taking proper sexual history
  - Ordering of the correct swab kits
  - Proper swabbing techniques
    - Self-collection vs. provider-collection
References


References


References


Thank you!

Questions?