M genitalium and urethritis and cervicitis

- Consider *M. genitalium* Rx in persistent/recurrent urethritis and in persistent cervicitis and PID

- Azithromycin 1 gm more effective
  - Doxy ineffective
  - AZ Resistance emerging

- For Rx failures with azithro1 gm, Moxifloxacin (400 mg daily x 7-14 days)

Chlamydia treatment

- Rx not changed

  - Effectiveness: azithromycin < doxycycline
    - Data from several studies and meta-analysis
      - Pooled cure rates: doxy=97.5% vs azithro=94.4%
      - Conclusion: doxy marginally superior to azithro

  - Doxycycline delayed release 200 mg tabs (Doryx)
    - ↓ GI upset
    - Qday x 7 days
    - ↑$
Oropharyngeal Chlamydia

- Clinical significance unclear
- Routine oropharyngeal CT screening **not** recommended
- Can be sexually transmitted to genital sites
- Treat oropharyngeal chlamydia with azithro or doxy

---

Antibiotic-Resistant Gonorrhea

- Doxy no longer recommended as 2nd antimicrobial for GC Rx
  - substantially ↑↑ prevalence of GC resistance to tetracycline vs azithromycin

Gonorrhea Dual Therapy: Uncomplicated Genital, Rectal, or Pharyngeal Infections

- **Ceftriaxone 250 mg IM in a single dose** **PLUS** **Azithromycin 1 g orally**

www.cdc.gov/std/tg2015/gonorrhea.htm
What does dual therapy mean?

- Ceftriaxone and azithromycin administered on the same day
  - Preferably simultaneously and under direct observation
  - Challenge if ceftriaxone IM in office and Rx for azithromycin to fill in pharmacy

Gonorrhea Treatment Alternatives 2010
Anogenital Infections

**ALTERNATIVE CEPHALOSPORINS:**
- Cefixime 400 mg orally once
  - *PLUS*
- Dual treatment with azithromycin 1 g
  - OR
- Doxycycline 100 mg BID x 7 days


Gonorrhea Treatment Alternatives 2015
Anogenital Infections

**ALTERNATIVE CEPHALOSPORINS:**
- Cefixime 400 mg orally once
  - *PLUS*
- Dual treatment with azithromycin 1 g
  - OR
- Doxycycline 100 mg BID x 7 days


- Doxy removed as co-treatment
IN CASE OF SEVERE ALLERGY:

Azithromycin 2 g orally once  
(Caution: GI intolerance, emerging resistance)

Gonorrhea Treatment Alternatives
Anogenital Infections

- Gentamicin 240 mg IM + azithromycin 2 g PO
- OR
  - Gemifloxacin 320 mg orally + azithromycin 2 g PO

www.cdc.gov/std/tg2015/gonorrhea.htm

Alternative Urogenital GC Regimens

- Non-comparative randomized trial in adults with urethral or cervical gonorrhea
  1. Gentamicin 240 mg IM + azithromycin 2 g PO, or
  2. Gemifloxacin 320 mg PO + azithromycin 2 g PO

- Rationale for regimens
  - Additive effect between gentamicin and azithromycin (in vitro)
  - Gemifloxacin more active against GC with known ciprofloxacin resistance

<table>
<thead>
<tr>
<th></th>
<th>Gentamicin / Azithromycin</th>
<th>Gemifloxacin / Azithromycin</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n/N</td>
<td>% (L 95% CI)</td>
</tr>
<tr>
<td>Urethra/Cervix</td>
<td>202/202</td>
<td>100% (98.5%)</td>
</tr>
<tr>
<td>Pharynx</td>
<td>10/19</td>
<td>100%</td>
</tr>
<tr>
<td>Rectum</td>
<td>1/1</td>
<td>100%</td>
</tr>
</tbody>
</table>

Kirkcaldy, CID 2014

New regimen challenges

- Nausea common
  - 27% for gentamicin + AZ
  - 37% for gemifloxacin + AZ
  - 3% and 7% in each group vomited <1hr after administration

- Gemiflox no longer available
- FDA recently approved (6/15/2015) generic which may take several months to launch
- Updates on the availability can be found at:
  www.cdc.gov/std/treatment/drugnotices/gemifloxacin.htm
GC Test of Cure

- Patients with pharyngeal GC treated with an alternative regimen
  - Obtain test of cure 14 days after treatment, using either culture or NAAT
- Cases of suspected treatment failure
  - Culture and simultaneous NAAT
  - Call Erie Co Health Dept!!!!

Cephalosporin treatment failures

- Oral cephalosporin treatment failures reported worldwide
  - Japan, Hong Kong, England, Austria, Norway, France, South Africa, and Canada
- Ceftriaxone treatment failures in pharyngeal gonorrhea and a few isolates with high-level ceftriaxone resistance reported


Neisseria gonorrhoeae — Percentage of Isolates with Elevated Ceftriaxone Minimum Inhibitory Concentrations (MICs) (≥0.125 μg/ml), Gonococcal Isolate Surveillance Project (GISP), 2006–2013
Neisseria gonorrhoeae — Percentage of Isolates with Elevated Cefixime Minimum Inhibitory Concentrations (MICs) (≥0.25 μg/ml), Gonococcal Isolate Surveillance Project (GISP), 2006–2013

<table>
<thead>
<tr>
<th>Year</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006</td>
<td>0.0</td>
</tr>
<tr>
<td>2007*</td>
<td>0.0</td>
</tr>
<tr>
<td>2008*</td>
<td>0.0</td>
</tr>
<tr>
<td>2009</td>
<td>0.3</td>
</tr>
<tr>
<td>2010</td>
<td>1.2</td>
</tr>
<tr>
<td>2011</td>
<td>1.2</td>
</tr>
<tr>
<td>2012</td>
<td>1.2</td>
</tr>
<tr>
<td>2013</td>
<td>0.9</td>
</tr>
</tbody>
</table>


Suspected GC Treatment Failure After Recommended Dual Therapy: What do I do?

**REPORT:** ECDOH STD program ASAP (within 24 hours)

**CULTURE:** if GC culture not available, call ECDOH

**REPEAT TREATMENT:** Gemifloxacin 320 mg + AZ 2g OR gentamicin 240 mg IM + AZ 2g

**TREAT PARTNERS:** Within 60 days with same regimen as patient receives

**TEST OF CURE (TOC):** Patient returns in 7-14 days for TOC culture and NAAT

* If reinfection suspected instead of treatment failure, repeat Tx with CTX 250mg + AZ 1g

Trichomonas vaginalis testing

- Consider screening in high prevalence settings and persons at high risk for infection
- Tests types
  - Point of Care (POC)
  - Clinical lab
CLIA–waived, POC, trichomonas tests

- OSOM Trichomonas Rapid Test (Sekisui Diagnostics, Framingham, MA)
  - immunochromatographic capillary flow dipstick technology
  - test vaginal secretions
  - self-testing may be an option
  - sensitivity 82-95% / specificity 97–100%

- Results available in 10 minutes

Trichomonas NAATs

- APTIMA Trichomonas vaginalis assay (Hologic Gen-Probe, San Diego, CA)
  - FDA cleared for ♀ endocervical, vaginal, or urine specimens
  - Sensitivity = 95-100% / specificity = 95-100%
  - Can test ♀ urine or urethral swabs if validated per CLIA specification

- BD Probe Tec TV Q Amplified DNA Assay (Becton Dickinson, Franklin Lakes, NJ)
  - FDA-cleared for ♀ endocervical, vaginal, or urine specimens
Other trichomonas lab tests

- Affirm VP III (Becton Dickinson, Sparks, MD)
  - Nucleic acid probe-hybridization test
  - FDA-cleared to test vaginal secretions
  - Evaluates for T. vaginalis, G. vaginalis, and C. albicans
  - Results available within 45 minutes
  - Sensitivity = 63% and specificity = 100%

- Culture
  - Vaginal secretions preferred specimen
  - Sensitivity = 75-96% / Specificity up to 100%
  - Can test urethral swab, urine, or semen

- Wet prep exam of vaginal secretions
  - Sensitivity = 51-65%
  - Requires immediate evaluation of the specimens for optimal results

Expedited partner therapy

- Should be considered as part of STD management

www.cdc.gov/std/epl/

EPT in NYS

- EPT is permissible for chlamydia only
- Do not need to include partner(s) name(s) on Rx
- No limit on # of EPT Rx
- For e-Rx, consider creating patient “EPT” to send to pharmacy
Want to know more about STDs?

There's an app for that.

CDC Treatment Guidelines
App for Apple and Android

http://www.cdc.gov/std/tg2015/
NYSDOH: Clinical Education Initiative (CEI)

http://www.celtraining.org/index.cfm

STD Clinical Consultation Network (STDCCN)

8 Regional PTCs

www.STDCCN.org
Questions???