Mycoplasma genitalium: An Important Consideration in Male Urethritis

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Overview

- Introduction to Mycoplasma genitalium
- Audit
  - Objectives
  - Standards
  - Results
- Reflection
  - AFPHM learning objectives
  - Public health
Background

- Mycoplasma genitalium
  - Sexually transmissible
  - Multiple presentations
    - Urethritis
    - Asymptomatic
    - Cervicitis
    - PID
  - Infection is common
  - Often resistant to empirical treatment
    - Increasing resistance
    - High risk groups
Background

- Why is it important?
  - Persistent urethritis
  - STI transmission
  - Adverse pregnancy outcomes
- How to test?
  - Nucleic acid amplification tests
- Who to test?
  - Symptomatic
  - Sexual partners
- Treatment
Treatment - Australian STI Management Guidelines

<table>
<thead>
<tr>
<th>Situation</th>
<th>Recommended</th>
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</thead>
<tbody>
<tr>
<td>Macrolide-susceptible</td>
<td>1. <strong>Doxycycline</strong> 100mg bd for 7 days, then:</td>
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<td>2. <strong>Azithromycin</strong> 1g stat then 500mg daily for three days (total 2.5g)</td>
</tr>
<tr>
<td>Macrolide-resistant</td>
<td>1. <strong>Doxycycline</strong> 100mg bd for 7 days, then:</td>
</tr>
<tr>
<td></td>
<td>2. <strong>Moxifloxacin</strong> 400mg daily for 7 days</td>
</tr>
<tr>
<td>Pelvic inflammatory disease</td>
<td><strong>Moxifloxacin</strong> 400mg daily for 14 days</td>
</tr>
</tbody>
</table>
Our audit

Setting

- Metropolitan sexual health clinic for men who have sex with men (MSM)

Primary objective

- To evaluate of first line testing for M. genitalium in symptomatic clients
  - Testing policy recently instituted
  - Standard 1: 100%
Our audit

- **Secondary objectives**
  - What proportion of clients were treated empirically for urethritis?
    - Standard 2: 100%
  - What proportion of *M. genitalium* positive clients were treated in accordance with clinic guidelines?
    - Standard 3: 50%
Results

115 patients with urethritis

- 77 tested for M. Gen (77% met Standard 1)
  - 4 M. Gen positive
  - 67 M. Gen negative
  - 6 missing results
- 38 not tested for M. Gen (33%)
- 96 treated empirically
  - 96 treated in line with guideline
  - 10 justified
- 19 not treated empirically
  - 9 lacked justification
- 4 treated out of line with guideline
- 0 treated in line with guideline (0 met Standard 3)
- 106 (92%) met Standard 2
Discussion

- No standard was met
- Encouraging findings
  - Adherence to empirical treatment guidelines
- Standard 1 - rate of M. genitalium testing
  - 67% adherence
  - Emerging infection
  - New assay and testing policy
  - Likely improved through education and process improvement
Discussion

- **Standard 2 - empirical treatment of urethritis**
  - High rate of empirical treatment (96 out of 115)
  - Improved through more thorough documentation

- **Standard 3 - targeted treatment of M. genitalium**
  - Strong awareness of clinic guidelines
  - Low compliance
    - Lack of national and international consensus
    - Limited evidence behind guidelines
  - Requires ongoing review with clinician input
Reflection

- Evaluate health services and public health programs (AFPHM LO 3.3.1)
  - Audit
    - Form useful objectives
    - Determine appropriate standards
    - Evaluate performance
    - Identify strengths and weaknesses
    - Determine and implement improvements
Reflection

- Contribute effectively to organisational processes (AFPHM LO 1.2.4)
  - Audit results
    - Strengths and weaknesses
  - Place in organisational context
    - Review of systems
    - Identified potential software update
    - Positive feedback
Reflection

- Public health knowledge
  - Management of an emerging infectious disease
    - Learning opportunities, and challenges
  - Importance of public health policy
    - Unified approach to detection and management
    - Facilitate small and large scale change
    - Reduce incidence and prevalence of emerging disease
    - Improve health outcomes
Summary

- **Audit results**
  - Excellent empirical management of urethritis
  - Room for improvement in testing and management of *M. genitalium*

- **Learning points**
  - Audit
    - A tool to evaluate health services
    - Using results to contribute to organisational processes
  - Importance of public health policy
    - In setting of emerging infectious disease
Acknowledgements

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  - Dr. Lewis Marshall
  - Other doctors, nurses, peer educators
- John Snow Scholarship Program
References

Alternative treatment regimens:

- MSHC: same as Australian STI management guidelines
- UptoDate
  - First line (targeted or empirical): 1g stat azithromycin
  - Second line (targeted or empirical): moxifloxacin
- British Association for Sexual Health and HIV
  - Doxycycline 100mg BD for 7 days, or:
  - Azithromycin 500mg stat, then daily for 7 days
  - If persistent or recurrent, azithromycin 500mg stat, 250mg OD for 4 days, plus metronidazole 400mg BD for 5 days
- Emerging treatment: solithromycin
Only RCT:

- 398 men in New Orleans
- Doxycycline 100mg BD for 7 days, or azithromycin 1g stat
  - Azithromycin more effective