Tubo-ovarian abscess in OPAT

James Hatcher
Consultant in Infectious Diseases and Medical Microbiology
OUTLINE

• What is a tubo-ovarian abscess

• Current recommendations

• Our experience and challenges

• How to improve service

Images from CDC Public Health Image Library
Pelvic inflammatory disease

- Pelvic inflammatory disease is the overall term for infection ascending from the endocervix
- *Neisseria gonorrhoeae* and *Chlamydia trachomatis* have been identified as causative agents
- IUD increases risk of PID but only for 4-6 weeks post insertion

- Symptoms
  - Lower abdo pain, discharge, dyspareunia, abnormal vaginal bleeding
- Signs
  - Bilateral lower abdo tenderness, fever
  - Adnexal tenderness on bimanual vaginal examination
Cervicitis
Endometritis
Salpingitis
Oophoritis
Tubo-ovarian abscess
Peritonitis
Sepsis
2018 United Kingdom National Guideline for the Management of Pelvic Inflammatory Disease

‘Admission for parenteral therapy, observation, further investigation and/or possible surgical intervention should be considered in the following situations (Grade 1D)

• Lack of response to oral therapy
• Clinically severe disease
• *Presence of a tubo-ovarian abscess*
• Intolerance to oral therapy’
Inpatient regimens
IV ceftriaxone 2g OD PLUS doxycycline 100mg BD PLUS metronidazole 400mg BD for 14 days (Grade 1A)
IV therapy should be continued until 24 hours after clinical improvement then switched to oral (Grade 2D)

Surgical management
Laparoscopy may help severe disease by dividing adhesions and draining abscesses
Ultrasound guided aspiration is less invasive and may be equally effective
Antimicrobial agents alone are effective in 70%

Candidates for antibiotic therapy alone (Grade 2C):

- No signs of rupture/sepsis
- Abscess <9cm in diameter
- Adequate response to antibiotic therapy
- Premenopausal

If no response after 48-72 hrs then drainage or surgery

Duration minimum of 2 weeks but may need 4-6 weeks

- ‘most experts recommend continuation of antibiotic therapy until the abscess has resolved on follow up imaging’
• **Drainage is essential if diameter of abscess is more than 3cm** (Grade B)

• **Transvaginal drainage is preferred** (Grade C)
ICHNT Service

• Large West London Service
  – Charing Cross Hospital
  – St Mary’s Hospital
• >10 years service
• 73514 bed days saved
• 3031 patient episodes
Our experience

• OPAT database 2012 – 2017
• 19 patients episodes
  – 18 patients with one patient having 2 episodes

46 years
average age

9.5cm
mean abscess size
range 5-16cm

50%
bilateral abscesses
58%
Surgical or radiological intervention
4/18 self administration

47% had oral follow on

Ciprofloxacin and co-amoxiclav most common choice
Duration of antibiotic therapy

18 days
median length stay before OPAT
range 6-39

27 days
median duration of OPAT
range 10-80

53 days
Median total antibiotic duration
Including admission days, OPAT
days and oral follow on
Comparing patients with/without surgical or radiological intervention

<table>
<thead>
<tr>
<th></th>
<th>Patients without intervention (n=8)</th>
<th>Patients with intervention (n=11)</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (years)</td>
<td>49</td>
<td>44</td>
<td>0.2997</td>
</tr>
<tr>
<td>Mean abscess size (cm)*</td>
<td>9</td>
<td>9.6</td>
<td>0.7003</td>
</tr>
<tr>
<td>Mean duration OPAT abx (days)</td>
<td>30</td>
<td>31</td>
<td>0.8974</td>
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<tr>
<td>Mean duration TOTAL abx (days)</td>
<td>54</td>
<td>60</td>
<td>0.5694</td>
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</table>

*3 patients did not have size of abscess recorded in notes
100% Long Term Cure
(18 patients)

<table>
<thead>
<tr>
<th>Infection Outcome</th>
<th>BSAC</th>
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<tbody>
<tr>
<td>Cure</td>
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<tr>
<td>Fail</td>
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<tr>
<td>Improved</td>
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<tr>
<td>NR</td>
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<tr>
<td>Grand Total</td>
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What are the issues

- No clear guidance on management of tubo-ovarian abscesses
  - Size of abscess needing intervention
  - Duration of antibiotics
  - IV versus oral antibiotics

- Needs an MDT approach to management
  - Gynae
  - Infection Specialists
  - Interventional radiologists
  - OPAT services
How to improve our service

• Clear local guidance for a management strategy/pathway

• Dedicated interventional radiologist
  – First line trans-vaginal USS and will drain at the time if amenable
  – Will do follow up scans at regular intervals

• Early involvement of Infection team +/- OPAT

• Good engagement from an MDT
Outpatient Parenteral Antimicrobial Therapy

Nurses + Pharmacists + Doctors = Clinical Team
References

• Workowski KA, Bolan GA. Sexually transmitted diseases treatment guidelines, 2015. MMWR Recomm Rep, 2015 vol. 64(RR-03)pp. 1-137


• Ross J et al. 2018 United Kingdom National guideline for the management of pelvic inflammatory disease. BASHH.