Appropriate Antibiotics for Peritonsillar Abscess
A 9 Month Cohort

Naveed Kara, Catherine Spinou
Department of Otolaryngology, Ninewells Hospital, Dundee, United Kingdom

Abstract

Objectives: To assess the efficacy of the currently used protocol in the management of peritonsillar abscess in a tertiary referral centre in the UK.

Methods: A prospective linear study was designed. 78 patients were referred to our hospital between October 2005 and July 2006 with suspected peritonsillar abscess. Vital signs, CBC and Monospot were recorded. Aspirate samples were sent for culture and sensitivity. Intravenous antibiotics and analgesia were started blindly. The choice, duration of treatment, and length of in-hospital stay were recorded.

Results: 52 cases of peritonsillar abscess were confirmed. Culture of the aspirates isolated only Streptococci in 14 and only Mixed Anaerobes in 13, with 11 cases growing both. 25 samples were sensitive to Penicillin and 26 were sensitive to Metronidazole, with a level of cross cover between the sensitivities. 20 patients received only 1 iv antibiotic, while 30 received iv monotherapy, while 30 patients received a combination of antibiotics. Metronidazole was the second antibiotic used in all 30 cases. A comparison between the aspirate sensitivities and the antibiotics initially prescribed, showed that in 17 cases the treatment was inappropriate. This resulted in a mean inpatient stay of 2.4 days compared to 1.8 days for cases on appropriate antibiotics.

Conclusions: The frequent finding of Mixed Anaerobes as a sole or second organism justifies the use of Metronidazole in addition to Penicillin in our practice. The authors recommend the use of a combination of intravenous Penicillin and Metronidazole in patients admitted to hospital with a peritonsillar abscess as routine practice.

Introduction

Peritonsillar abscess is a well recognised complication of bacterial tonsillitis, frequently leading to hospital admission. The mainstay of its treatment is with intravenous antibiotics and draining the abscess either by way of aspiration, incision and drainage, or tonsillectomy.

The departmental protocol at our hospital was to aspirate the abscess and to commence IV penicillin (unless allergic), adding in Metronidazole in resistant cases. Despite this being the protocol, it was observed that many patients were commenced on a combination of above, by choice of the admitting clinician.

It was therefore decided to study these two groups of patients in order to ascertain whether following the protocol was more beneficial to the patient than empirically commencing dual antibiotic therapy.

The aims of this study were to:
1. Examine the microbiological aspects of peritonsillar abscess
2. Assess how appropriately peritonsillar abscess were being managed within our department
3. Determine the role of Metronidazole as an additional first-line treatment for peritonsillar abscess

Methods and Materials

A 9-month prospective case note study was designed and all patients referred with a peritonsillar abscess were initially included (n=78). All subjects with negative abscesses were then excluded (n=26).

Vital signs and demographic data was noted. All aspirates were sent for microbiology, culture and sensitivity testing. All patients had a complete blood count and bloods tested for electrolytes and inflammatory markers, as well as testing for Monospot (Epstein Barr Virus).

Their clinical courses were then noted in detail.

Results

A total of 52 patients with positive aspirates were obtained, with an equal male to female ratio. The abscess was left sided in 28 patients and right sided in 23 patients. None of the patients tested positive for Glandular Fever.

The mean length of stay was 3.2 days (range 0-6 days). The mean quantity of pus aspirated was 3.6 mls (range 0.5-15mls) 9 patients required repeat aspirate or incision and drainage, and 2 patients underwent a “hot tonsillectomy”.

20 patients received only 1 iv antibiotic, while 30 received iv Metronidazole in addition.

48 aspirates were submitted to microbiology:
• 14  - Streptococci only
• 13  - Mixed Anaerobes only
• 11  - Streptococci & Mixed Anaerobes
• 6   - No Growth
• 4   - Others (B. Urealyticum, H. Influenza, Mixed mouth flora)

60% of aspirates tested sensitive to Metronidazole of which only 38.5% had been treated with it. Of the 40% who did not test sensitive to Metronidazole, half of them had been treated with it.

Average Length of Stay

<table>
<thead>
<tr>
<th>Appropriate Antibiotics</th>
<th>Over or Under Treated</th>
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<tbody>
<tr>
<td>58.5%</td>
<td>41.5%</td>
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<tr>
<td>1.8 days</td>
<td>2.4</td>
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Conclusions

Mixed Anaerobes are extremely common as either the sole or the second responsible organism in patients with peritonsillar abscess.

The use of appropriate antibiotics is associated with a quicker recovery.

Sensitivities are not available at the time of presentation, and therefore ENT Departments should consider the use of Metronidazole as an additional first-line treatment for peritonsillar abscess until directed otherwise by sensitivities.

References