

Management Of Peritonsillar Infection: Hospital Universiti Sains Malaysia Experience

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Citation

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Abstract

Introduction : Peritonsillar infection is the most common deep infection of head and neck region in adult. Despite of that, the treatment of peritonsillar abscess remains controversial. Objective : To demonstrate the demographic distribution of peritonsillar infected patients, therapeutic approaches, antibiotics used and the role of culture & sensitivity Design : Observational retrospective study at Hospital Universiti Sains Malaysia. All patients diagnosed to have peritonsillar infection were recruited and medical records review was done. Results : Thirty five patients were identified where by the highest incidence in young adult males. Majority experienced it as the first episode. No antibiotic change required after culture and sensitivity testing. Conclusion : Diagnosis is clinical, and infections are often resolved by intravenous penicillin. Fine-needle aspiration of pus is warranted to establish the diagnosis and drainage should be performed if an abscess is confirmed.

INTRODUCTION

Peritonsillar space infection is most commonly caused by *Streptococcus* sp. The space is bounded medially by palatal tonsil, laterally by superior constrictor muscles and superior, inferior and posterior borders by tonsillar pillars. The peritonsillar infection usually begins at the outside of tonsillar capsule into the tonsillar space (typically begins at superior pole).

History of recurrent sore throat, allergy and dental caries are the known risk factors for the peritonsillar infection. The patient may present with odynophagia, uvular deviation, tonsillar asymmetry, trismus and drooling of saliva.

Aspiration or incision and drainage to the affected peritonsillar swelling usually give immediate relief to the patient. Simultaneously, antibiotic usually will be started at the time of admission.

In our center, the patient diagnosed as peritonsillitis or abscess will be treated as in-patient. Aspiration will be performed and if it is draining abscess, incision and drainage will be commenced. Pus will be sent for culture and sensitivity. Choice of antibiotics, although most commonly used is intravenous penicillin, is still surgeons preference.

OBJECTIVE

The objective of this study is to demonstrate the

demographic distribution of peritonsillar infected patients, therapeutic approaches, antibiotics used and the role of culture & sensitivity in Hospital Universiti Sains Malaysia.

METHODOLOGY

This is an observational retrospective study. The admission registry was revised and all of the patients who were diagnosed as peritonsillitis or abscess on admission, between 2003 to 2006 were recruited in the sample.

The medical records review was done. The variables gathered were age, sex, history of recurrent tonsillitis, antibiotic administration, therapeutic approach, culture grow and length of hospital stay.

RESULTS

Between the 4-year study period, a total number of 35 patients were identified.

Except one Chinese patient, all of the rest were Malays. Male patients were affected more than female with the ratio of 1.7: 1. The peak age group of patients in our study sample was 21 to 30 years old

Majority of our patients, 65.7 % denied any form of sore throat before. The side involved almost equally distributed between right and left.

All of them underwent needle aspiration. Only those that

drained pus were subjected to incision and drainage.

Figure 1

Table 1 : Mode of surgical intervention

Procedure	Aspiration	Incision & Drainage
No of patients	11	24

Out of 24 peritonsillar swelling that contained pus, only 15 of them were sent for culture and sensitivity test. The organisms cultured were as shown in Table 2.

Figure 2

Table 2 : Results of the culture and sensitivity tested

Organism cultured	No of samples
Streptococcus sp	7
Mixed growth	4
Normal flora	4

Figure 3

Table 3 : Antibiotics used depending on surgeons preference

Antibiotic	No of patients
Pennicillin G alone	20
Pennicillin G + Metronidazole	12
Cefuroxime + Metronidazole	2
Co-amoxicillin/clavulanic acid + Metronidazole	1

The patients will be observed in-ward till they were afebrile and can take orally well. Thus, the length of stay reflects the effectiveness of the antibiotic used. Most of the patients required 3 to 4 days hospital stay with the mean of 3.4 days.

DISCUSSION

Peritonsillar infection is a common disease affecting mostly young adult. In our set up, the distribution was slightly common in male. The peak incidence was in the 21 to 30 years old.

There was no case of bilateral lesions. In our series, the left peritonsillar space was slightly more commonly affected than the right. Majority of our patients (65.7 %) denied any history of similar illness or sore throat before.

The goal standard for diagnosis of peritonsillar abscess remains the collection of pus from the abscess through needle aspiration. If the aspirate is negative for pus, the diagnosis will be peritonsillar cellulitis or peritonsillitis. Peritonsillar abscess occurred in 68.5% of our patients.

Controversy remains over the necessity of incision and drainage versus needle aspiration alone. However, most otolaryngologists consider incision and drainage to be the gold standard for treatment. The current practice of Otolaryngologists at Hospital Unievrstiti Sains Malaysia is to aspirate all the peritonsillar swellings. It serves both for diagnostic and theraputic purposes. Later on, if the needle aspiration contained pus, all of them were subjected to incision and drainage under local anaesthesia. Out of 24 patients who were positive with abscess, only 15 (62.5 %) of the drained collection were sent for culture and sensitivity.

It is well demonstrated in other study that culture and sensitivity of abscess fluid have little bearing in the management of peritonsillar abscess₁₂. In our series, all of our patients improved with the empirical antibiotic started. None of them required antibiotic change because of mismatch problem.

By far the most common is group-A beta-hemolytic streptococci₃. The outcome of the culture in our study population grew expected organisms ie Streptococcus sp, mixed organism and normal flora. Thus it did not impose any effect to the management of the patient. Hence, the routine culture and sensitivity testing, in a peritonsillar swelling patients need not to be performed except in cases of immunosuppressed patients₄.

Empirical antibiotics were started at the time of admission. The choice was still surgeons' preference. Several antibiotics of choice include penicillin, metronidazole, amoxicillin/clavulanic acid and cefuroxime. Penicillin used to be antibiotic of choice for the treatment of peritonsillar abscess, but in recent years the emergence of beta-lactamase-producing organisms has required the change of antibiotic choice₅. However, comparison of clinical outcomes done by Kieff et al, with respect to hours hospitalized and mean hours febrile showed that there were no statistically significant difference between groups, indicating that broad-spectrum antibiotics failed to show greater efficacy than penicillin in the treatment of these patients₂.

In our hospital, majority of the treating surgeons still prefer to use penicillin although there is a tendency to use other antibiotics as well, which is more expensive. It was shown that regardless of the type of antibiotic chosen, all patients improved with the mean length of stay of 3.4 days. No patient required antibiotic change because of unresponsive to treatment. Only one patient who was started with penicillin G initially, developed urticarial hypersensitivity reaction and was switched to cefuroxime. There was a study that recommended the use of penicillin as the first-line agent, and, if there is no response within the first 24 hours, adding 500 mg of metronidazole administered twice daily to the regimen.

CONCLUSION

The treatment of peritonsillar cellulitis or abscess remains controversial. In our centre, we practice that all swelling should undergo aspiration and to be proceeded with drainage

via small incision if it is containing pus. The intravenous penicillin remains an excellent choice for therapy in cases of peritonsillar abscess requiring parenteral antibiotics after drainage.

References

1. Herzon FS. Peritonsillar abscess; incidence, current management practice and a proposal for a treatment guidelines. *Laryngoscope* 1995. 105; 1-17.
2. Kieff DA, Bhattacharyya N, Siegel NS, Salman SD. Selection of antibiotics after incision and drainage of peritonsillar abscesses. *Otolaryngol Head Neck Surg* 1999. 120; 57-61.
3. Terrence E. Steyer. Peritonsillar Abscess: Diagnosis and Treatment . *Am Fam Physician* 2002. 65: 93-6.
4. Y K Ong, Y H Goh, Y L Lee. Peritonsillar infections; Local experience. *Singapore Med J* 2004 Vol 45 (3). 105-109.
5. Parker GS, Tami TA. The management of Peritonsillar Abscess in the 90s; an update. *Am J Otolaryngol* 1992.13:284-8.
6. Hardingham M. Peritonsillar infections. *Otolaryngol Clin North Am* 1987;20:273-8.

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