



Contents lists available at BioMedSciDirect Publications

International Journal of Biological & Medical Research

Journal homepage: www.biomedscidirect.com



Original Article

Peritonsillar abscess management; needle aspiration versus incision and drainage, comparison of outcomes.

Sufian A Alroud, Qais M Aljfout, Sohaib Almomani, Eyad L Abu Nahleh, Sufian T Alnawaiseh, Mohammad I Alrawashdeh.

Department of Otorhinolaryngology, Head & Neck Surgery, Royal Medical Services, Amman – Jordan

ARTICLE INFO

Keywords:

Aspiration

Incision

Peritonsillar abscess.

ABSTRACT

Objective: To evaluate and compare needle aspiration versus incision and drainage in the management of peritonsillar abscess with regard to clinical outcome. **Methods:** Retrospective analysis of clinical records of 103 patients admitted with peritonsillar abscess. Medical records abstract form was designed to collect data which include: age, gender, side of abscess, duration of symptoms prior to admission, previous history of peritonsillar abscess, method of drainage used, history of usage of antibiotics prior to admission and length of hospital stay. The drainage procedure in our practice is either incision & drainage or needle aspiration. Patients were divided into two groups according to the drainage procedure used; group A if incision & drainage was done and group B if needle aspiration was done. **Results:** Group A were 41 patients who underwent incision and drainage, 29 patients (71%) were males and 12 (29%) were females. Group B included 62 patients, 42 patients (68%) were males and 20 (32%) were females. Both groups have comparable demographic data. There was no statistical difference regarding which side affected in both groups and both sides were affected almost equally. Previous history of quinsy was present in 3 patients (7%) of group A and 5 (8%) of group B. The length of hospital stay was comparable between our study groups; 3.9 ± 1.7 days for group A and 3.7 ± 2.1 days for group B. **Conclusion:** Needle - aspiration is as effective as incision and drainage in the management of peritonsillar abscess in most cases and it can be used as the first step in treatment plan.

© Copyright 2010 BioMedSciDirect Publications IJBMR -ISSN: 0976:6685. All rights reserved.

1. Introduction

Peritonsillar space is the most common site for pus collection in the head and neck area; (1,2) this space located between the superior constrictor muscles of the pharynx and the fibrous capsule of the tonsil and palatopharyngeal muscle. The incidence of peritonsillar abscess or quinsy ranges from 13 – 30 per 100000 person-years.(3,4) Some have discussed the seasonal variation where autumn and spring are the most common seasons.(5) Quinsy usually presents in young adults, most studies showed male to female ratio to be 2:1, and its usually unilateral.(6-8) Peritonsillar abscess usually occurs secondary to tonsillar infection. Patients

usually present with sore throat, trismus, painful swallowing, fever, and dehydration. In all most all patients have used oral antibiotics for several days without improvement and this is the usual cause for referral from general practitioners or family physicians. In most cases the infection corresponds to a mixed flora of aerobic and anaerobic agents.(9) If this condition is not treated adequately; there is a risk of developing serious complications due to extension of the disease as major vessels thrombosis mediastinitis, pericarditis, pneumonia and upper airway obstruction. The management of peritonsillar abscess is still controversial; whether outpatient or inpatient policy. Management option includes incision and drainage, needle aspiration and quinsy tonsillectomy in addition to systemic antibiotics and steroid therapy. In our practice; inpatient management is the rule and quinsy tonsillectomy is not practiced. The aim of this study is to evaluate and compare needle aspiration versus incision and drainage with regard to clinical outcome.

* Corresponding Author : Dr Qais Aljfout

Po box 1643

Tareq – Amman

Jordan

Mobile: 00962776582620

Email: qaisj@yahoo.com

2. Methods:

Retrospective analysis of clinical records of patients admitted with peritonsillar abscess at our hospital from January 2004 to December 2009. Medical records abstract form was designed to collect data which include: age, gender, side of abscess, duration of symptoms prior to admission, previous history of peritonsillar abscess, method of drainage used, history of usage of antibiotics prior to admission and length of hospital stay. The drainage procedure in our practice is either incision & drainage or needle aspiration. Patients were divided into two groups according to the drainage procedure used; group A if incision & drainage was done and group B if needle aspiration was done. The former is done as follows: after topical application of lidocaine 2% spray, a small incision is made at the most obvious bulging area and usually it is just lateral to the junction of uvula and soft palate and its extended inferiorly, a blunt hemostat is placed into the wound and dissection is done until pus is encountered and adequate drainage is achieved. Needle aspiration is done as follows: after topical application of lidocaine 2% spray; 10 ml syringe with 18 gauge needle is used for aspiration, the position of the needle is changed until pus is encountered and drainage considered adequate when no more pus is aspirated. If there was no pus patient was treated as peritonsillar cellulites with intravenous antibiotics, and if he continue to have symptoms after 36-48 hours; another trial of drainage is done.

All patients were admitted for intravenous antibiotics therapy and intravenous fluid support as most of them have a degree of dehydration. Intravenous antibiotics were either penicillin with metronidazole or cephalosporin (second or third generation) with metronidazole. The choice of antibiotics depends on the preference of attending doctor and availability of the drug in the hospital at time of admission. Statistical analyses were performed with SPSS for Windows, using t-test and chi-squared tests when appropriate. All data are expressed as the mean \pm standard deviation (S.D.). A value of $P < 0.05$ was considered statistically significant.

3. Results

A total of 103 patients with peritonsillar abscess were admitted to our hospital, 71 patients were males (69%) and 32 were females (31%). Group A were 41 patients who underwent incision and drainage, the mean age was 26.3 ± 7.4 year, 29 patients (71%) were males and 12 (29%) were females. Group B included 62 patients with mean age of 25.2 ± 8.1 year, 42 patients (68%) were males and 20 (32%) were females. Both groups have comparable demographic data table 1. Group A patients had their symptoms for 5.1 ± 1.8 days prior to admission compared to 4.8 ± 2.4 days for group B. All patients of both groups had history of oral antibiotics usage prior to admission. There was no statistical difference regarding which side affected in both groups and both sides were affected almost equally. Previous history of quinsy was present in 3 patients (7%) of group A and 5 (8%) of group B. The length of hospital stay was comparable between our study groups; 3.9 ± 1.7 days for group A and 3.7 ± 2.1 days for group B. there were no statistically significant differences between clinical data of our study groups table 2.

Table 1: Demographic data of our study groups.

	Group A	Group B
Age (year)	26.3 ± 7.4	25.2 ± 8.1
Male:Female	29:12	42:20

Table 2: clinical data of our study groups.

	Group A	Group B	p value
Duration of symptoms prior to admission (day)	5.1 ± 1.8	4.8 ± 2.4	> 0.05
Antibiotics usage prior to admission	100%	100%	> 0.05
Side affected left right	19 (46%) 22 (54%)	33 (53%) 29 (47%)	> 0.05
Previous history of quinsy	3 (7%)	5 (8%)	> 0.05
Length of hospital stay (day)	3.9 ± 1.7	3.7 ± 2.1	> 0.05

4. Discussion

Peritonsillar abscess is one of the relatively common causes of admission to otolaryngology ward in our practice, usually patient present first to the emergency room or referred from family physician. Early diagnosis and prompt initiation of therapy is important to avoid possible complications.

Incision and drainage was the most common method to drain PTA, but nowadays ; no data to support which method is the commonest. Guy de Chauliac; a French surgeon was the first one to perform incision and drainage in 1362.(10) During 1980s needle aspiration became more popular in the United States as it's technically simple and cost effective.(4,11,12)

Hospitalization of patients or management on an outpatient basis is still controversial. In our practice; In patient management is the rule, as in addition to IV antibiotics, intravenous fluids are given since most of the patients present with poor oral intake and dehydration. In the united kingdom, most of the patients are admitted in contrast to the united states where most of patients are managed as outpatients.(13) Although, in almost every case, abscess is sent for culture, results have little effect on the management of these cases since most of patients improve with drainage and empirical antibiotics used on admission and the possibility of negative results due to antibiotics used prior to admission. We do give our patients systemic steroids as it shows better and quiker improvement of symptoms especially dysphagia which also enhance recovery.(14)

Drainage of abscess is the most important step of Peritonsillar abscess management, without adequate drainage; resolution and improvement will not occur and there are higher risks of complications. The method used for this is still controversial

worldwide; both needle aspiration and incision – drainage are equally effective in achieving this goal. In our hospital both methods are practiced according to the preference of the surgeon who is managing the case. Herzon et al. suggests that puncture-aspiration can be used as the only drainage procedure, as it obtains a resolution rate of 96%, and leaves incision-drainage as an alternative for cases of failure of the first technique (4) in contrast to Wolf et al and Ophir et al said that there is a high immediate failure rate with needle aspiration.(15,16) in our practice we have found that needle- aspiration has comparable results to incision-drainage in terms of symptoms relieve and length of stay in hospital with the advantage that its not as awkward to the patient as incision and drainage. In conclusion; needle - aspiration is as effective as incision and drainage in the management of peritonsillar abscess in most cases and it can be used as the first step in treatment plan as its simple, effective, cheap and less traumatic to the patient keeping the incision and drainage as a backup procedure for more difficult patients.

5. References

- [1] Petruzzelli GJ, Johnson JT. Peritonsillar abscess – why aggressive management is appropriate. *Postgrad Med* 1990; 88:99-108.
- [2] Spires JR, Owens JJ, Woodson GE, Miller RH. Treatment of peritonsillar abscess. A prospective study of aspiration vs incision and drainage. *Arch Otolaryngol Head Neck Surg* 1987; 113:984-6.
- [3] Raut VV, Yung MW. Peritonsillar abscess: the rationale for interval tonsillectomy. *Ear Nose Throat J* 2000; 79:206-9.
- [4] Herzon FS. Peritonsillar abscess: incidence, current management practices, and a proposal for treatment guidelines. *Laryngoscope* 1995; 105:1-17.
- [5] Richardson KA, Birck H. Peritonsillar abscess in the pediatric population. *Otolaryngol Head Neck Surg* 1981; 89:907-9.
- [6] J. P. Simons, B. F. Branstetter, and D. L. Mandell, "Bilateral peritonsillar abscesses: case report and literature review," *American Journal of Otolaryngology*, vol. 27, no. 6, pp. 443–445, 2006.
- [7] J. T. Edinger, E. Y. Hilal, and K. J. Dastur, "Bilateral peritonsillar abscesses: a challenging diagnosis," *Ear, Nose and Throat Journal*, vol. 86, no. 3, pp. 162–163, 2007.
- [8] S. Kristensen, A. Juul, and F. Nielsen, "Quinsy: a bilateral presentation," *Journal of Laryngology and Otology*, vol. 99, no.4, pp. 401–402, 1985.
- [9] Brook I. Microbiology and management of peritonsillar, retropharyngeal, and parapharyngeal abscesses. *J Oral Maxillofac Surg*. 2004;62:1545--50.
- [10] Richardson KA, Birck H. Peritonsillar abscess in the pediatric population. *Otolaryngol Head Neck Surg* 1981; 89:907-9.
- [11] Savolainen S, Jousimies-Somer HR, Makitie AA, Ylikoski JS. Peritonsillar abscess. Clinical and microbiologic aspects and treatment regimens. *Arch Otolaryngol Head Neck Surg* 1993; 119:521-4.
- [12] Herzon FS. Peritonsillar needle drainage of peritonsillar abscesses. A five-year experience. *Arch Otolaryngol Head Neck Surg* 1984; 110:104-5.
- [13] Garas G, Ifeacho S, Cetto R, Arora A, Tolley N. Prospective audit on the outpatient management of patients with a peritonsillar abscess: how we do it. *Clin Otolaryngol*. 2011;36:174-9.
- [14] Ozbek C, Aygenc E, Tuna EU, Selcuk A, Ozdem C. Use of steroids in the treatment of peritonsillar abscess. *J Laryngol Otol*. 2004;118:439-42.
- [15] Wolf M, Even-Chen I, Kronenberg J. Peritonsillar abscess: repeated needle aspiration versus incision and drainage. *Ann Otol Rhinol Laryngol* 1994; 103:554-7.
- [16] Ophir D, Bawnik J, Poria Y, Porat M, Marshak G. Peritonsillar abscess. A prospective evaluation of outpatient management by needle aspiration. *Arch Otolaryngol Head Neck Surg* 1988; 114:661-3.