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Pain management of peritonsillar abscess

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Abstract

One year cross sectional study was undertaken in 50 patients with peritonsillar abscess to determine the treatment that was most effective in relieving the excruciating pain associated with the condition. The patients were divided into two treatment groups: intravenous antibiotic, and incision and drainage.

The effect of treatment over was objectively assessed by serially measuring the distence between upper & lower incisor and by giving the patient water to drink at regular intervals to determine the point at which swallowing was pain-free.

The improvement of the mean upper to lower incisor distance 15 minutes after the initial treatment was five per cent in the intravenous antibiotic group and 100 per cent in the incision and drainage group.

None of the patients in the intravenous antibiotic group was able to swallow water two hours after the initial treatment. In the same time interval 23 patients (92 per cent) in the incision and drainage group were able to swallow water.

The conclusion derived from this study is that incision and drainage is superior to intravenous antibiotic in relieving the pain associated with peritonsillar abscess.

Key words: Peritonsillar Abscess, Pain.

Introduction

Peritonsillar abscess is a collection of pus between the fibrous capsule of the tonsil, usually at the upper pole, and the superior constrictor muscles of the pharynx & it is an extremely painful condition. The marked trismus together with severe odynophagia prevents oral intake necessitating intravenous fluid replacement. Surprisingly for a condition with such morbidity no consensus has been reached on treatment[1]. Besides the pain, life threating condition such as airway obstruction , spontaneous rupture with aspiration pneumonitis and parapharyngeal abscess with jugular vein thrombosis may develop[2]. the recommended treatment range from intravenous antibiotic, aspiration, incision and drainage.

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Materials and Methods:

50 patients were selected randomly from out- patients department of Otolaryngology and Head neck surgery, BSMMU, Dhaka, during the period of January 2007-December 2007. Among 50 patients 20 patient were male & 30 were females. The ages ranged from 15-44. The mean age was 22.5 years.

They presented with trismus and odynophagia with inability to swallow even their saliva resulting in drooling. There was unilateral swelling of the tonsil and soft palate, and medial displacement of the uvula and all patients had pyrexia. The patients were randomly divided into two treatment groups.

Intravenous antibiotic group

The patients were treated with intravenous penicillin, 10,00000 units six-hourly and diclofen sodium suppository (50 mg), 12 hourly.

Incision and drainage group:

The abscess was incised and drained under local anesthesia.

In addition, the patients in the aspiration and incision and drainage groups were prescribed single dose of intramuscular benzathine penicillin 1.2 million units and paracetamol Tab. (1gm 8 hourly).

Results

1. Mouth opening that is the distance between upper and lower incisor teeth was recorded mouth maximally open before the commencement of treatment and 15 minutes and 24 hours after the initial treatment (Figure 1).

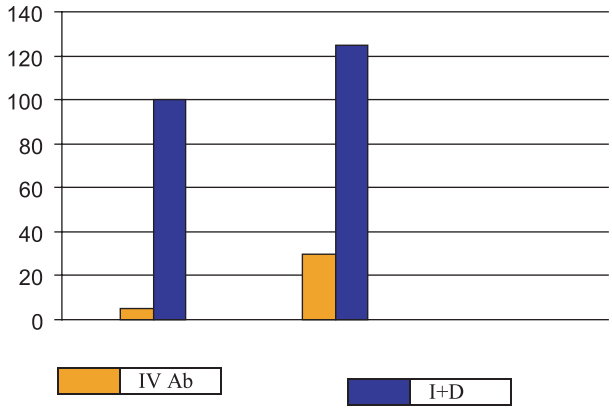

Fig.1

Improvement of mean upper to lower incisor distance 15 minutes and 24 hours after initial treatment expressed as a percentage IV Ab= intravenous antibiotics: I+D = incision and drainage.

2. Pus for culture and sensitivity were taken from all the 25 patients of incision group (Result of culture Table-I)

Table - I

Bacteria	Number Patients	Percentages
Streptococcus Species Pyogenes Viridans Milleri Pneumoniae	15	60%
Staphylococcus aureus	1	4%
Klebsiclla	1	4%
E. Coli	2	8%
Anaerobes	3	12%
Anaerobes and aerobes	2	8%
No growth	1	4%

3. Patients were allowed to take plenty water to drink 2 hours after initial treatment. Incision and drainage group patients was pain free after 24 hours but not the only antibiotic group.

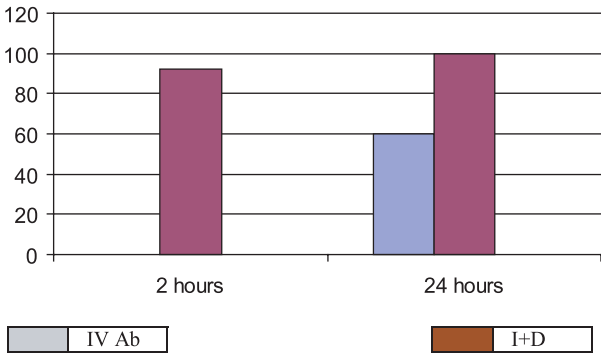

Fig.-2

Percentage of patients that were able to swallow water at two and 24 hours after initial treatment IV Ab a intravenous Ab.; I+D incision and drainage

4. The body temperature was recorded during commencement of treatment and 6 hourly. It was observed that temperature subsided in incision and drainage group of peritonsillar abscess after 48 hours but not in only in antibiotic group.

5. Treatment failure were patients in whom the trismus and pyrexia persisted 48 hours after the initial treatment. There were 10 patients (40%) in the intravenous antibiotic group but none was in the incision and drainage group. Later on 10 failure patients were treated by incision and drainage.

Discussion

Pain is a predominant factor of peritonsiliar abscess and it manifests as trismus and odynophagia. The trismus is thought to be due to inflammation of the medial pterygoid muscle which lies lateral to the tonsil. The spasm produces severe pain preventing the mouth from opening fully and hence the patients are unable to eat or drink, and drooling is common. As the spasm diminishes opening of the mouth becomes easier. This manifests as an increase in upper to lower incisor distance. Therefore by serially measuring this distance one is able to assess the effect of any treatment on trismus and consequently pain.

In this study there was 100 per cent improvement of the mean upper to lower incisor distance in the incision and drainage group, 15 minutes after the procedure, whilst in the intravenous antibiotic groups there was only five percent improvement respectively demonstrating that incision and drainage is very effective in relieving the trismus associated with PTA (Figure 1).

The odynophagia is due to inflammation of the superior constrictor muscle of the pharynx which forms the

lateral wall of the tonsil. The magnitude of the pain is such that the patients are afraid to swallow, even their own saliva, resulting in drooling.

Oral intake only commences when the pain subsides, and therefore by giving the patient water to drink at regular intervals one can determine the point at which the pain has subsided completely. This was used as an indirect determinant of the effectiveness of the various treatment.

None of the patients in the intravenous antibiotic group was able to drink water two hours after the initial treatment. In the same time interval 92 percent of patients in the incision and drainage group were able to swallow water without any discomfort (Figure 2). This is very important when considering treating patients with peritonsillar abscess as out-patients. The pre-requisites for outpatient treatment are that patients must be able to take fluids and antibiotics orally. According to this study 92 per cent of the patients in the incision and drainage treatment group could be treated as out-patients.

The bacteriology of the PTA revealed aerobic and anaerobic organisms (Table-I). The commonest bacterium was Streptococcus species (60 percent).

This is similar to the 62 per cent and 70 per cent reported by Maharaj et al[3] and Savolainen[4] respectively. Importantly all Streptococcus species were sensitive to penicillin thus making it the drug of choice for patients with peritonsillar abscess. Haeggstrom et al.[5] in 1987 reported the same.

The success with incision and drainage was 100 per cent, similar to the report by Wolf et al[6]. It seems that the presence of pus in the periton sillar space is responsible for the pain because as soon as the abscess cavity is decompressed and the pus evacuated, the pain subsides. This effect was noted in all patients with incision and drainage and also in the nine patients in the intravenous antibiotic group who reported instantaneous pain relief when the abscess ruptured spontaneously.

Therefore, in order to relieve the pain and suffering, the peritonsillar abscess must be incised and drained immediately. This can be safely and effectively undertaken in the ENT clinic under local anaesthesia. Incision and drainage is less painful if carried out with proper infiltration of local anesthesia at the site of drainage rather than local anaesthetic spray[7]. Abscess tonsillectomy was not recommended in this study. Abscess tonsillectomy is a technique with poor reputation in the UK part is practiced in Germany[8].

References:

1. Thin Thin NWE. Management of pain in peritonsillar abscess. J Laryngol otal, 2000; 114: 765-767.
2. Cowan DL, Hibbert J. In: Kerr A, ed. Scott Brown's Otolaryngology, 6th edn. London: Butterworth 1988:5, chapter 4
3. Maharaj D, Rajah V, Hemslcy S. Management of peritonsillar abscess. J Laryngol Otol, 1998;105:743-5.
4. Savolainen S, Jousimies-Somer HR, Makitie AA. Ylikoski JS. Peritonsillar abscess: clinical and microbiological aspects and treatment regimens. Arch Otolaryngol Head Neck Surg, 1993;119:521-4
5. Haegestrom D, Engquit A, Hallander H. Bacteriology in peritonsillitis. Acta Otolaryngol, 1987; 103:151-8
6. Wolf M, Even-Chcn I, Kronenbcrg J. Peritonsillar abscess: Repeated needle aspiration versus incision and drainage. Ann Otol Rhinol Laryngol, 1994; 103:554-7.
7 Tandon S, Roe J, Lancasler J. A randomized trial of local anesthesia in the management of quinsy. Clinical otolaryngology and Allied sciences, 2004; 29: 535-7.
8. Windfuher JP, Chen YS. Immediate abscess tonsillectomy – a safe procedure ? Auris Nasus Larynx, 2001; 28: 323-7.