



## RESEARCH ARTICLE

### MANAGEMENT OF PERITONSILLAR ABSCESS: COMPARATIVE PROSPECTIVE STUDY OF MEDICAL AND SURGICAL MANAGEMENT (NEEDLE ASPIRATION AND INCISION & DRAINAGE IN KASHMIRI POPULATION)

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#### ABSTRACT

Peritonsillar abscess (PTA) is one of the most commonly encountered abscess in the Head and neck region. Peritonsillar abscess also called as Quinsy is commonest infection in head and neck region. It is collection of pus within the peritonsillar space as a result of acute tonsillitis and subsequent Peritonsillar cellulites. The aim of our study is to compare the efficacy of Medical and Surgical treatment surgical modalities available are- incision & drainage, needle aspiration.

**Methods:** This prospective study was conducted at the Department of Otorhinolaryngology and Head & Neck Surgery, SMHS Hospital Srinagar (GMC Srinagar) for 15 months, from Nov 2015 to Jan. 2017. Adult patients (>20 years) of both sexes with unilateral peritonsillar abscess were included sequentially. Children, patients with acute follicular tonsillitis or peritonsillitis and those who refused incision and drainage under LA were excluded. All patients received the same antibiotic Amoxicillin/Clavunate and underwent needle aspiration and I&D procedure under LA.

**Results:** 56 patients were included in the study, 25 males and 31 females. Out of 56 patients, Peritonsillar abscess recurrence was 3 patients (16.6%) in Group1, 2 Patients (12.5%) in 2A and 2 patients (9.09%) in Group 2B. History of recurrent tonsillitis was noted in 12 Patients (66.6%) in Group1, 10 Patients (62.5%) in Group 2A and 13 Patients (59.09%) in Group 2B.

**Conclusion:** Incision and drainage and needle aspiration are better treatment. But Needle aspiration can be utilized as first step of management of peritonsillar abscess as it is simple, cheap, effective and less traumatic to the patients. Medical Management can be considered in patients with less advanced symptoms or smaller abscess size. It has been observed that Medical Treatment has less complications but more recurrence compared to surgical treatment.

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## INTRODUCTION

Peritonsillar abscess is defined as localized collection of pus within the peritonsillar space as a result of acute tonsillitis and subsequent Peritonsillar cellulites. This is one of the commonest presentations in ENT department. The incidence of peritonsillar abscess (PTA) ranges from 13 – 30 per 100000 persons per year (Johnson, 2005). The condition usually presents unilaterally and affects any age group from 10 to 60 years but is most common in the age group 20 to 40 years (Sufian, 2012). Usual causative bacteria seemed to alter from gram-positive cocci (mainly streptococcus hemolytic (group A) to anaerobes and gram-negative rods (Jothimahalingam, 2007).

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Treatment varies at different centers.<sup>4,5</sup>The generally accepted classic treatment consists of either per-mucosal aspiration or incision and drainage<sup>6</sup>. It is more common in females than males. Clinical presentation is usually bizarre. If this condition is ignored; there is a huge risk of developing serious complications due to extension of the disease as major vessels thrombosis, mediastinitis, pericarditis, pneumonia and upper airway obstruction (Sufian, 2012). The treatment is controversial- medical or surgical. Surgical modalities available are- incision & drainage, needle aspiration.

## MATERIAL AND METHODS

This prospective and comparative study was carried out in Otorhinolaryngology department of SMHS Hospital Srinagar (GMC Srinagar) during 15 months period (November 2015 to January 2017).

All suspected patients of peritonsillar abscess above 20 years of age irrespective of sex were included in the study. A written informed consent was obtained from all such patients regarding participation in study, details of procedures, benefits & risks involved, etc. Detail clinical history and thorough examination and investigations were carried out. Peritonsillar abscess was diagnosed as follows: swollen upper pole of tonsil showing congested anterior pillar, swollen and deviated uvula towards opposite side, trismus and presence of pus on needle aspiration. All the patients received antibiotic therapy. Most common IV antibiotic Ampicillin/Sulbactam and the most common oral antibiotic used was Amoxicillin/Clavunate. For those with Penicillin allergy, Clindamycin was most frequently used second line agent.

was 15 cases on right side and 7 cases on left side. History of recurrent tonsillitis was noted in 12 Patients (66.6%) in Group1, 10 Patients (62.5%) in Group 2A and 13 Patients (59.09%) in Group 2B. Peritonsillar abscess recurrence was 3 patients (16.6%) in Group1, 2 Patients (12.5%) in 2A and 2 patients (9.09%) in Group 2B.

## DISCUSSION

Peritonsillar abscess is a disease usually affecting young adults of 20 and 40 years. The age range of our patients is similar to that in the study by Hasan *et al.* (2005) Contrary to our results, a retrospective study of 724 patients with PTA from Japan reported an estimated rate of 25% of patients aged

**Table 1. Comparative Clinical Features in three subgroups and clinical outcome**

Parameters Studied	Group 1	Group 2A	Group 2B	
SEX	Male Female	8 10	9 7	8 14
Age of Presentation		32.40 Yrs.	31.60 Yrs.	33.50 Yrs.
	Right Left	11 6	10 6	15 7
Laterality	Bilateral	1	Nil	Nil
Symptom Duration		3.9 Days	4.1 Days	4.4 Days
History of recurrent tonsillitis		12 Patients (66.6%)	10 Patients (62.5%)	13 Patients (59.09%)
Peritonsillar abscess recurrence		3 Patients (16.6%)	2 Patients (12.5%)	2 patients (9.09%)

Needle aspiration was performed with a wide bore 18-gauge needle on a 10-ml syringe at the site of maximum swelling. The position of the needle is changed and drainage considered adequate when no more pus was aspirated. Incision and drainage was done after applying 10% xylocaine topical spray to the affected side followed by 2% xylocaine with adrenaline (1:200,000 parts) infiltration. A small curvilinear incision was made in the mucosa with a 15-size surgical Blade either over the most fluctuant part of the swelling or in the mucosa just lateral to the junction of uvula and soft palate. A blunt artery forceps was placed into the wound and spread until adequate drainage was achieved. All patients received the same preoperative and postoperative therapy, i.e., 12-hourly intravenous Amoxicillin/Clavunate 1.2 grams for the first day and thereby 12-hourly orally 1 gram for next six days. Added to this were parenteral/oral diclofenac sodium, pyodine mouth wash. Patients were examined in OPD at one-month interval for three months for evidence of recurrence. The parameters studied were sex predisposition, age of the patient, history of recurrent tonsillitis, hospital stay, PTA recurrence, complications.

## RESULTS

We analyzed 56 patients presented to ENT department with symptoms of peritonsillar abscess during 15 months period (November 2015 to January 2016). 18 belonged to group 1 who underwent Medical Management and 38 in group 2 who underwent Surgical Management and then group 2 further divided into two subgroups i.e. 2A which includes 16 patients who underwent needle Aspiration and group 2B which includes 22 patients who underwent Incision & Drainage. Results are as follows. There were 31 females and 25 males. Mean age of presentation Group1 32.40 years, group 2A 31.60 Years and Group 2B 33.50 Years. Duration of symptoms before coming to ENT OPD was 3.9 days in Group1, 4.1 days in Group 2A and 4.4 days in Group 2B. Laterality in Group1 was 11 cases on right side, 6 on left side and 1 was bilateral, in Group 2A was 10 cases on right, 6 on left side and in Group 2B

years 40 or older (Mastuda *et al.*, 2002) while in the study by Schraff S *et al.*; all of the patients were from pediatric age group (Schraff *et al.*, 2001). Our study is consistent with other studies in showing male preponderance (Iqbal *et al.*, 2009; Shaikh, 2008). But an equal distribution between two sexes has been reported in a study from UK (Kara, 2012). All cases were unilateral as well as predominant left side involvement which is noted similarly in other retrospective studies as well. 6, 10 But in a western study the incidence of bilateral PTA has been reported to be between 3.9–6.5%. 13 Bilateral PTAs can present as a diagnostic challenge as the uvula might not be deviated which a common physical examination is finding for typical PTAs. Majority of the patients presented with sore throat, fever, odynophagia, and trismus supported by other studies (Tyagi *et al.*, 2011; Iqbal *et al.*, 2009).

Odynophagia is due to inflammation of the constrictor muscles of the pharynx especially the superior constrictor muscle, which forms the lateral boundary of the peritonsillar space, while trismus is caused by the inflammation and spasm of muscles of mastication mainly the medial pterygoid muscle which is in close proximity to the peritonsillar space. Trismus is the main culprit for dehydration in PTA patients because they are unable to open the mouth and reluctant to eat or drink (Brodsky *et al.*, 1988). The referred type otalgia caused by the common sensory innervation of the two areas, i.e. ear and peritonsillar space by the glossopharyngeal nerve (Tyagi *et al.*, 2011). In this study most cases reported were unilateral, more commonly on right side. Only one case was having bilateral presentation. Rate of complications were more in group 2B (those underwent incision and drainage), but less complications were observed in Medical Management Group and Needle aspiration Group 2A. Both patients in Surgical Management Group (2A and 2B) presented with postoperative bleeding from surgical site. The rate of complications can be reduced to great extent if appropriate precautions taken and proper antibiotics are administered. Drainage of pus to maximum extent is the most important step.

The current literature commonly recommends surgical intervention, including aspiration or incision and drainage, for PTAs with success rates near 90%<sup>15, 16</sup>. However, some small studies have demonstrated that medical treatment could offer similar success rates and may be an alternative to invasive management in patients with mild to moderate symptoms in limited resource settings.<sup>10,12</sup>

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