ORIGINAL ARTICLE

EFFICACY OF NEEDLE ASPIRATION ALONG WITH ANTIBIOTICS AND SHORT DOSE OF STEROID IN THE TREATMENT OF PERITONSILLAR ABSCESS (QUINSY).

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ABSTRACT

Background: Quinsy (also known as Peritonsillar abscess) can be defined as pus collection in peritonsillar space (between superior constrictor muscle of pharynx and lateral surface of tonsil). It is a common complication of tonsillitis.

Objective: To find out the efficacy of needle aspiration along with antibiotics and short dose of steroid in the treatment of peritonsillar abscess.

Methods: This is a descriptive, prospective study. It was carried out on 27 consecutive patients which were treated for Quinsy from September 2016 to August 2018. All of the patients were hospitalized. Peritonsillar abscess was treated with aspiration of pus by wide bore needle followed by Antibiotics and short dose of steroid.

Results: 74 % of patients were found to have previous history of recurrent tonsillitis. 56 percent of patients were already receiving antibiotics at the time of presentation. Mean hospital stay was two days. None of the patients required incision drainage. Recurrence was seen in only 3 patients.

Conclusion: Needle-aspiration at the most prominent (bulging) part of the peritonsillar region followed by intravenous antibiotics and steroids is an effective treatment protocol. We also suggest further controlled studies on larger number of patients to establish its efficacy and safety.

Key Words: Quinsy, Peritonsillar abscess, tonsillitis, trismus.

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INTRODUCTION:

Quinsy (which is also known as peritonsillar abscess) can be defined as pus collection between lateral surface of tonsil (fibrous capsule) and the superior constrictor muscle of pharynx.[1,2] Peritonsillar abscess is one of the common complications of tonsillitis and it is also the most common infection of deep neck space. [3] Its incidence rate is 30 per 100,000 of population every year.[4] It usually presents with Throat pain, fever, painful swallowing (Odynophagia) and difficulty in mouth opening (Trismus).

The management options for peritonsillar abscess include antibiotics, incision & drainage, Aspiration with a wide bore needle hot tonsillectomy or Interval tonsillectomy[5] At most of the tertiary care centers, the routine treatment is Incision and drainage followed by culture specific Antibiotics. While at other centers wide bore needle aspiration is done followed by antibiotics and sometimes steroids.[3,7]

If peritonsillar abscess is not treated it can extend into deep spaces of neck. Complications of an untreated peritonsillar abscess include parapharyngeal abscess, epiglottitis, retropharyngeal space abscess, jugular vein thrombosis, brain abscesses, meningitis, cavernous sinus thrombosis and sepsis.

This study has been done to review the diagnostic and therapeutic management of our patients with Quinsy prospectively over a period of two years (September 2016 to August 2018).

METHODS:

This is a descriptive and prospective study. This study was carried out on 27 consecutive patients of Quinsy over a period of two years (September 2016 to August 2018).

The Diagnosis of Peritonsillar abscess was labelled on the basis of detailed history, examination and ultrasonography. The clinical variables collected were: age, gender, previous history of recurrent sore throat, previous history of quinsy, treatment being taken and its duration, presenting complains, findings of clinical examination, treatment given at our center, duration of hospital stay and condition of patient on follow up visit after one week. Although some centers treat this condition on outpatient basis but at our center, all the patients with Peritonsillar abscess were hospitalized. Abscess was drained with wide bore needle from the point of maximum bulging[6]. Patients were given analgesics, Intravenous antibiotics and intravenous steroids for one to three days. The patients were discharged when they were afebrile and shown significant improvement on clinical examination. Statistical analysis was done with SPSS 18.0 software.

RESULTS:

We analyzed 27 consecutive patients of Quinsy over a period of 2 years (September 2016 to August 2018). Table 1 demonstrates the important epidemiological and clinical characteristics of our patients. In this study the age of our patients was from 10 to 46Years. The mean age was 25 Years

Regarding gender, male to female ratio was 1:1.25 (12 Patients were male while remaining 15 patients were female). We found that 20 (74%) patients were also having previous history of recurrent sore throat. Previous history of peritonillar abscess (quinsy) was also present in 6 (22%) patients. 12 Patients (44 %) had not started any antibiotic before treatment at our center. Mean duration of stay at hospital was only 2 days (with a range of 1 to 3 days). Out of 27 patients, only 3(11%) shown recurrent episode of Quinsy over the next 6 months.

Now our next table (Table 2) demonstrates clinical features (signs & symptoms) of our patients.

The sign and symptoms of disease were recorded in the following percentages; fever 27(100 %), odynophagia 27(100 %), trismus 21(78%) deviation of the uvula to the opposite side26 (96%), bulging of the anterior pillar25 (93%), and enlargement of cervical lymph nodes were present in 20(74%) of cases. Contrary to a common belief, that trismus is always present in quinsy, we found that absence of trismus doesn't always rule out quinsy.

Table 1. The main Epidemiological & Clinical characteristics

Mean Age	25 Years (10-46 Years)
Gender	
Male	12(44.4%)
Female	15(55.6%)
Laterality	
Right	13 (48%)
Left	14 (52%)
Previous history of Repeated sore throat	20 (74%)
Previous history of Quinsy	6 (22%)
Prior Antibiotic therapy	15 (56%)
Mean Hospital stay	2 days (1-3 days)
Recurrence	3 (11%)

Table 2. Clinical Features in 27 patients of Quinsy*.

Symptoms/signs	Number of patients (%)
Fever	27(100%)
Odynophagia	27(100%)
Trismus	21(78%)
Contralateral uvular deviation	26(96%)
Bulging of anterior tonsillar pillar	25(93%)
Cervical lymphadenitis	20(74%)

*Patients mostly presented with more than one symptom

All of our patients, with quinsy, were admitted in the hospital and treated with antibiotics and steroids. Antibiotic given was intravenous ceftriaxone in a dose one gram twelve hourly in adults and 50mg/kg/day in children. Patients were given intravenous Dexamethasone 4mg every 8hourly in adults while 0.3mg/kg/day in children. Intravenous therapy varied from one to three days. Most of the patients received intravenous therapy for 2 days and shown significant clinical improvement and got afebrile. Incision drainage was not required in any patient. We discharged most of

the patients after 48 hours and they were advised oral antibiotics for another 7 days. Oral treatment consisted of Cefixime, a tablet of 200mg twice a day in adults and 8mg/kg/day in pediatric age group. Patients were called for follow up visit after one week. After one weak all the patients were disease free. We followed the patients for 6 months for recurrence of quinsy. Only three patients shown recurrence. In 9 patients (33%) we suggested performing tonsillectomy as they were either having previous history of quinsy or got recurrence in next 6 months.

DISCUSSION:

In current literature, most of the published studies are retrospective. The results of these studies represent the management of this disease in about two decades evolution. To minimize the heterogeneity, we decided to perform prospective analysis of the patients with peritnosillar abscess, by managing them with same diagnostic protocols and same treatment regimen.

In this study we found that 56% patients were already taking antibiotics to treat the sore throat. This finding supports the classical theory that quinsy is the complication of pharyngotonsillitis. However, in our series, its percentage seems to be more than which was already present in previous studies, which was between 11% and 55%.[3, 7, 8]

The diagnosis of peritonsillar abscess is simple and it can be diagnosed on the basis of symptoms and physical exploration.[4] t can also be confirmed with ultrasonography. It is an inflammatory disease, mostly unilateral, and the patients usually present with fever , severe throat pain, difficulty in mouth opening (trismus) and painful swallowing(odynophagia). According to Kilty et al[10], the trismus, bulging of the anterior tonsillar pillar and contralateral uvular deviation can help in distinguishing between a phlegmonous early stage and peritonsillar abscess even without requiring puncture. But in our study, trismus was absent in 22% patients. Ultrasound is also used at some centers for diagnosis and guided needle aspiration (puncture). Some authors also recommend CT-Scan (Computerized tomography) for uncooperative pediatric patients.[4]

We also found the link between history of recurrent pharyngotonsillar infections and development of peritonsillar abscess, as 74 % of patients were having history of repeated sore throat.

Regarding management, whether to hospitalize or manage on outpatient basis, there is difference of opinion between different authors. In countries like UK, patients are mostly hospitalized while in United States of America, they are usually managed as outpatients.[11]

In this study we admitted these patients to hospital for intravenous antibiotics and steroids. Adequate liquids were also ensured to prevent dehydration. Drainage of pus is an important part of treatment but there are controversies regarding its method. Some authors advocate puncture-aspiration with wide bore needle while others like incision and drainage. Literature shows that both of them are equally effective.[12,13]

At our center, puncture-aspiration with wide bore needle is performed in OPD. According to management guideline for Quinsy, as described by Herzon et al[3], puncture & aspiration with wide bore needle may be done as the first line procedure for drainage purpose, as its rate of success is 96%. They also recommend that incision & drainage should be used only where puncture-aspiration fails. Some authors are also in favor of performing immediate tonsillectomy in these patients (hot tonsillectomy) .[14] In this study, we found that all of our cases shown significant recovery and there was no need for incision and drainage in any of the patient. The antibiotic, ceftriaxone, was given intravenous at a dose of one gram 12 hourly in adults and 50mg/kg/day in children. At the same time, administration of corticosteroids is very useful in improving symptoms like pain, trismus and dysphagia as also observed by other authors.[15] Therefore, along with antibiotic we also used corticosteroids in our patients.

Nelson et al[16] believe that microbial culture and sensitivity studies are not very significant in these patients, because broad spectrum antibiotics are usually very effective even before receiving the results of these studies. Additionally, very often, the reports of cultures and sensitivity show “No Growth” as most of the patients are already taking antibiotics at the time of presentation. Culture and sensitivity study is only useful in patients who show poor recovery or who are immunocomprmized.

A Study by Wikstén et al has shown recurrence of quinsy between 10% - 50%. They also noticed that the rate of recurrence is high in those patients who are less than 40 years old and also those patients who had previous history of repeated sore throat.[17] The rate of recurrence in our study is just 11% which clearly shows the efficacy of our treatment plan.

In some of the previous studies, only a single episode of quinsy had been labelled as an indication for tonsillectomy, [9,18] but on the basis of our study we don’t consider it an absolute indication for tonsillectomy. However, in patients with previous history of quinsy or recurrence of the disease after medical treatment, we suggest an interval tonsillectomy.

CONCLUSION:

Quinsy is a common complication of Tonsillitis. It has got a good prognosis when treated properly. Various treatment protocols are being followed at different centers. We believe, from our Experience, that Needle-aspiration at the most prominent (bulging) part of the peritonsillar region followed by intravenous antibiotics and steroids is an effective treatment protocol. We also suggest further controlled studies on larger number of patients to establish its efficacy and safety.

ETHICAL APPROVAL

The study was approved from Ethical Review Committee of Islam Medical & Dental College, Sialokt, Pakistan, vide reference No. 2020-02/ENT dated July 27, 2020.

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AUTHOR'S CONTRIBUTION:

NA: Manuscript writing, research, editing
KW: Surgical assistance, follow up
JA: Data collection, proof reading
AHS: Surgical assistance, data analysis
MI: Data collection, literature search
MH: Data analysis, radiological assistance