

A clinical and epidemiological study on peritonsillar abscess in tertiary health center

Richa Gupta¹, Manish Mittal²

¹Department of ENT, SS Medical College, Rewa, Madhya Pradesh, India, ²Department of PSM, Pacific Medical College, Udaipur, Rajasthan, India

Correspondence to: Richa Gupta, E-mail: dr_richa_tulip@yahoo.com

Received: August 17, 2016, **Accepted:** September 08, 2016

ABSTRACT

Background: Peritonsillar abscesses (PTA) are the most common deep neck space infection and are a common complication of tonsillitis with variable sequelae. **Objective:** To evaluate 22 cases of PTA cases observed at the SS Medical College and GM Hospital, Rewa. **Materials and Methods:** The present study was done on 22 patients of PTA who presented to the SS Medical College and GM Hospital, Rewa from August 2012 to August 2013. **Results:** The most common age group was found to be 11-20 years with age ranging from 12 to 55 years. Males (14 cases) were found to be predominant. The right side involvement was seen in the majority of cases. One case of the bilateral peritonsillar abscess was found. The majority of patients presented with odynophagia and dysphagia. The appropriate antibiotic therapy must be initiated after aspiration of the abscess. Treatment included mainly incision/drainage in 11 cases, needle aspiration in 4 cases, quinsy tonsillectomy in 1 case, and conservative treatment was done in 6 cases. **Conclusion:** The need of hour is to diagnose the cases of peritonsillar abscess earlier and to intervene thereafter. The early diagnosis and recognition of the abscess help in appropriate treatment to begin before the involvement of surrounding anatomic structures.

KEY WORDS: Age; Odynophagia; Peritonsillar Abscess; Tonsillectomy

INTRODUCTION


Peritonsillar abscesses (PTA) are the most common deep neck space infection and are a common complication of tonsillitis with potentially disastrous sequelae.^[1] The most common symptoms at presentation are odynophagia, dysphagia, otalgia, trismus, fever, etc. Hot potato muffled voice and cervical lymphadenopathy are also associated.

Peritonsillar abscess is characterized by a purulent secretion collected between the fibrous capsule of the palatine tonsil and the pharyngeal superior constrictor muscle.^[2,3] Peritonsillar

infections are the most common infections of deep tissues of the head and neck region both in adults and children, with an incidence of approximately 30 cases per 100,000 population per year.^[4]

The management of PTA varies from antibiotic administration, needle aspiration, incision and drainage, quinsy tonsillectomy. Interval tonsillectomy also can be performed in a few cases. Although antibiotic play a fundamental role in a larger group of patients and can be administered as per the organism found in culture and sensitivity plates some patients still require surgical intervention.

The abscess if left untreated may extend into deep spaces of neck and aspiration of fluid in lower airways. The complications of an untreated peritonsillar abscess include epiglottitis, parapharyngeal abscess, retropharyngeal space abscess, jugular vein thrombosis, and sepsis. Intracranial complications include cavernous sinus thrombosis, brain abscesses, meningitis.

Access this article online	
Website: http://www.ijmsph.com	Quick Response code
DOI: 10.5455/ijmsph.2017.0954308092016	

International Journal of Medical Science and Public Health Online 2016. © 2016 Richa Gupta and Manish Mittal. This is an Open Access article distributed under the terms of the Creative Commons Attribution 4.0 International License (<http://creativecommons.org/licenses/by/4.0/>), allowing third parties to copy and redistribute the material in any medium or format and to remix, transform, and build upon the material for any purpose, even commercially, provided the original work is properly cited and states its license.

MATERIALS AND METHODS

The present study is an analytical review of 22 patients of peritonsillar abscess who presented to the SS Medical College and GM Hospital, Rewa from August 2012 to August 2013. The relevant data were collected with regarding age and sex distribution, the duration between incident and presentation, clinical presentation, management, and complications as per the predetermined questionnaire. All the patients were examined thoroughly with appropriate investigations such as hematological investigations, culture, and sensitivity of pus discharge to determine the organism. The pus was aspirated with needle or incision, and drainage was performed as per the required intervention in different cases.

RESULTS

Most patients 12 (54.54%) belong to 11-20 years age group with age ranging from 12 to 55 years. Six cases were observed in 21-30 years age group followed by 2 cases each in 41-50 and >50 years age group. No case was recorded in 0-10 and 31-40 years age group (Table 1).

Among 22 patients, peritonsillar abscess was found in 14 male patients and 8 female patients (Table 2).

As per socioeconomic status maximum patients of peritonsillar abscess belong to lower class, i.e., 12 (54.54%) followed by lower middle class, i.e., 6 (27.28%), middle class, i.e., 3 (13.64%), and upper class, i.e., 1 (4.54%) (Table 3).

The time of presentation of patient varied from 2 to 8 days. The classic symptoms of deviation of uvula, muffled voice and trismus were invariably present in most of the cases (94%). The majority of patients presented with odynophagia and dysphagia.

Right side was affected in most of the patients, i.e., 13 (59.1%) followed by left side, i.e., 8 (36.36%). Only one case had bilateral peritonsillar abscess (Table 4).

None of the cases showed any complications. The mode of management included mainly incision/drainage in 11 cases, needle aspiration in 4 cases, quinsy tonsillectomy in 1 case, and conservative treatment done in 6 cases.

DISCUSSION

Peritonsillar abscess is commonly encountered clinical entities presenting in everyday practice of otorhinolaryngologist. A peritonsillar abscess is usually a complication of tonsillitis or another bacterial infection. The peritonsillar cellulitis usually leads to abscess due to the formation of microabscesses in the tonsillar crypts. This leads to coalescence of pus in the capsule which ultimately leads to spontaneous rupture or

Table 1: Age-wise distribution

Age	Number of cases (%)
0-10	0 (0)
11-20	12 (54.54)
21-30	6 (27.26)
31-40	0 (0)
41-50	2 (9.1)
>50	2 (9.1)
Total	22 (100)

Table 2: Sex-wise distribution

Age	Number of cases (%)
Male	14 (63.64)
Female	8 (36.36)
Total	22 (100)

Table 3: Socioeconomic status wise distribution

Socioeconomic status	Number of cases (%)
Lower	12 (54.54)
Lower middle	6 (27.28)
Middle	3 (13.64)
Upper	1 (4.54)
Total	22 (100)

Table 4: Laterality wise distribution

Laterality	Number of cases (%)
Right	13 (59.1)
Left	8 (36.36)
Bilateral	1 (4.54)
Total	22 (100)

extension of the abscess. The time duration for this process is variable and depends on susceptibility of patients to infection and time of presentation between occurrence and consultation with health-care provider.

The condition usually presents unilaterally and affects any age group from 10 to 60 years but is most common in the age group of 20-40 years.^[5] In our study also, this was the most common group with maximum cases in 21-30 years age group. Young children are seldom affected unless they are immunocompromised, but the infection can cause significant airway obstruction in children.^[6,7] The male predominance was seen in our study.

Although bilateral PTA is quite rarely diagnosed, it must be taken into account that tonsillitis is obviously bilateral disease in most cases. Therefore, development of a peritonsillar cellulitis or abscess is quite likely to occur bilaterally.^[8] The most common presentation is unilateral and cases with bilateral presentation are rare. In our study, most cases had unilateral presentation with right side being most

common as compared to left side. Only one case had bilateral involvement.

As per socioeconomic status lower class was found to be commonly involved as compared to higher classes. This might be due to inadequate over the counter treatment taken by these classes for acute tonsillitis which leads to persistence of infection. Furthermore, limited access of this class to healthcare facility may be considered responsible.

The most commonly affected demographic consists of those in their late-teens to early 30s; and virtually all had the classic symptoms of trismus, muffled voice, and uvular deviation. Interestingly, fever was only found in 25% of study participants, but the vast majority (91%) of patients had an elevated neutrophil count on presentation.^[1] In the present study, the triad of classic symptoms was present in most of the cases.

The majority of surgeons manage patients by needle aspiration, or less commonly by incision and drainage on the first presentation. Clinically, both these methods have been demonstrated to be equally effective.^[1,9] Its management has been described widely, from pus aspiration, incision, and drainage to tonsillectomy.^[3,10] In our study, the most common management was incision and drainage. A few patients underwent conservative management in the form of antibiotics administration and supportive treatment. Quinsy tonsillectomy was done in one case in the present study. Abscess tonsillectomy is widely performed in Europe and US whereas I and D and needle aspiration followed by interval tonsillectomy appear to be the procedure popular in India.^[11] Abscess should be drained to relieve patient of symptoms, and adequate hydration should be done.

The majority of patients do not require tonsillectomy and remain asymptomatic after single attack. The “Wait and observe” policy is safe for most patients presenting with a single attack of peritonsillitis/peritonsillar abscess without a background history of tonsillitis.^[12] In our study, most patients remained asymptomatic after single attack. Two patients required tonsillectomy later on as they suffered recurrent attack of tonsillitis.

An untreated or improperly treated peritonsillar infection can evolve into a parapharyngeal space abscess, or cause sepsis, airway obstruction, carotid pseudoaneurysm, and even death.^[1] None of the patients developed complications in the present study.

CONCLUSION

This study gives an insight into the prevalence and clinicoepidemiological pattern of peritonsillar abscess. A vast majority of cases can be handled without the development of complications when diagnosed timely and adequately treated.

REFERENCES

1. Herzon FS, Harris P, Mosher Award thesis. Peritonsillar abscess: Incidence, current management practices, and a proposal for treatment guidelines. *Laryngoscope*. 1995;105 8 Pt 3 Suppl 74:1-17.
2. Mitchelmore IJ, Prior AJ, Montgomery PQ, Tabaqchali S. Microbiological features and pathogenesis of peritonsillar abscesses. *Eur J Clin Microbiol Infect Dis*. 1995;14(10):870-7.
3. Prior A, Montgomery P, Mitchelmore I, Tabaqchali S. The microbiology and antibiotic treatment of peritonsillar abscesses. *Clin Otolaryngol Allied Sci*. 1995;20(3):219-23.
4. Johnson RF, Stewart MG. The contemporary approach to diagnosis and management of peritonsillar abscess. *Curr Opin Otolaryngol Head Neck Surg*. 2005;13(3):157-60.
5. Khan MI, Iqbal K, Muhammad. Peritonsillar abscess: Comparison of outcome of incision and drainage versus needle aspiration. *Gomal J Med Sci*. 2012;10(2):205-8.
6. Hardingham M. Peritonsillar infections. *Otolaryngol Clin North Am*. 1987;20(2):273-8.
7. Schroeder LL, Knapp JF. Recognition and emergency management of infectious causes of upper airway obstruction in children. *Semin Respir Infect*. 1995;10(1):21-30.
8. Dalton RE, Abedi E, Sismanis A. Bilateral peritonsillar abscesses and quinsy tonsillectomy. *J Natl Med Assoc*. 1985;77(10):807-12.
9. Wolf M, Even-Chen I, Kronenberg J. Peritonsillar abscess: Repeated needle aspiration versus incision and drainage. *Ann Otol Rhinol Laryngol*. 1994;103(7):554-7.
10. Raut VV, Yung MW. Peritonsillar abscess: The rationale for interval tonsillectomy. *Ear Nose Throat J*. 2000;79:206-9.
11. Kulkarni V, Patel T. Management of peritonsillar abscess: Comparative prospective study of needle aspiration and incision & drainage in central Indian population. *Asian J Biomed Pharm Sci*. 2013;3(18):29-32.
12. Raut VV. Management of peritonsillitis/peritonsillar. *Rev Laryngol Otol Rhinol (Bord)*. 2000;121:107-10.

How to cite this article: Gupta R, Mittal M. A clinical and epidemiological study on peritonsillar abscess in tertiary health centre. *Int J Med Sci Public Health* 2017;6(3):521-523.

Source of Support: Nil, **Conflict of Interest:** None declared.