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ORIGINAL ARTICLE

Peritonsillar Abscess Treatment under Local Anaesthesia: Incision and Drainage versus Needle Aspiration

SAJID RASHID NAGRA[1], GHULAM DASTGIR KHAN[2], SALMAN AFTAB AHMED[3], SALEHA RASHID[4], ANAM MALIK[5], SAAD RASHID[6]
[1]Associate Professor, [3]Assistant Professor, [4]Medical Officer, Department of ENT, [5]FinalYear MBBS, Rai Medical College, Sargodha
[2]Associate Professor, Department of ENT, Sharif Medical & Dental College, Lahore
[6]3rdyear MBBS, Rahber Medical & Dental College, Lahore
Correspondence to Dr. Sajid Rashid Nagra, E-mail: srnagra50@gmail.com Cell: ,923004262548

ABSTRACT

Background: Peritonsillar abscess is usually complication of acute tonsillitis which itself is prevalent in society. As a general surgical principle, abscess any were, has to be drained so same applies for quinsy but methodology for this drainage is not being agreed.
Aim: To find best modality for drainage of this abscess and see its incidence in which age group and sex.
Study design: Prospective study
Place and duration of the study: Department of ENT, Rai Medical College, Sargodha from 1st Feb. 2017 to 31st Jan. 2019.
Methodology: One hundred and thirty five patients above 15 years of age and those in need of hospital admission due to severity of symptoms were included. Paediatric, immunocompromised, requiring general anesthesia and acute tonsillitis patients were excluded.
Results: There were 65.2% males and 34.8% females. Commonly affected age group was 21-40 years. Needle aspiration was found more effective for management of peritonsillar abscess.
Conclusion: No consensus for single modality and both needle aspiration and incision/drainage is advocated and needle aspiration proved fruitful in management.
Keywords: Quinsy, Peritonsillar abscess, needle aspiration

INTRODUCTION

QUINSY is an old term also known as peritonsillar abscess (PTA). This is an accumulation of pus in the potential space between the capsule of the tonsil and pharyngeal constrictor muscle. In a few patients PTA may be bilateral and classical features on clinical examination may not be early identified.[1] It mostly occurs in young adults and teenagers, usually the infectious season, at the turn of November and December as well April and May.[2] The epidemiology of peritonsillar abscess has not been widely discussed. Previously several studies have been reported on establishing the association between smoking and peritonsillar abscess.[3] It is commonly known to be the key complication of acute tonsillitis, but other mechanisms have also been suggested such as obstruction of accessory Webers salivary gland.[4] Patients with PTA may present with sore throat, odynophagia, fever, otalgia, trismus, muffled voice and halitosis or airway obstruction.[1]

Clinical examination of the oropharynx revealed marked asymmetry of the both, tonsillar enlargement with erythema and edematous peritonsillar area with displacement of uvula to the contralateral side.[5] Quinsy due to extensive spread of inflammation it may extend to soft palate, walls of pharynx & to the base of the tongue.[6] CTs for PTAs is more accurate with sensitivity 100% and specificity of 75%.[7]

Surgical management of PTA includes either abscess aspiration or incision and drainage or acute quinsy tonsillectomy.[8] Drainage can be under taken under general anesthesia or with the patient conscious. In an awake patient, analgesia can be achieved through conscious sedation by intravenous administration of analgesic drugs or by topical/ local anesthesia.[9] An untreated peritonsillar abscess can lead to parapharyngeal space abscess, airway obstruction, carotid pseudo aneurysm and even death.[10]Prompt diagnosis and treatment can avoid serious complications.[11,12] Another point to ponder is that unilateral asymmetry of palatine tosils found during otolaryngological examination may be accompanied by neoplastic process[13] as this is the site where primary oropharyngeal tumours are most likely to develop[14].

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MATERIALS AND METHODS

This prospective study conducted at Department of ENT, Rai Medical College Sargodha from 1st February 2017 to 31st January 2019. A total of 135 patients were included and informed consent from each patient taken regarding study. Patients aged 15 and above were included as local anaesthesia to be used for aspiration and incision/drainage and need hospital admission for treatment as symptoms were not improving with conservative oral treatment were included. Paediatric patients not included in this study that is 14 years and below as difficult to aspirate or perform incision/drainage under local anaesthesia, acute peritonsillitis instead of peritonsillar abscess (Quinsy), confirmed after negative aspiration and responded to intravenous antibiotics, pain killers and steroids, immunocompromised diseases or bleeding disorders and who required general anaesthesia for management were excluded.

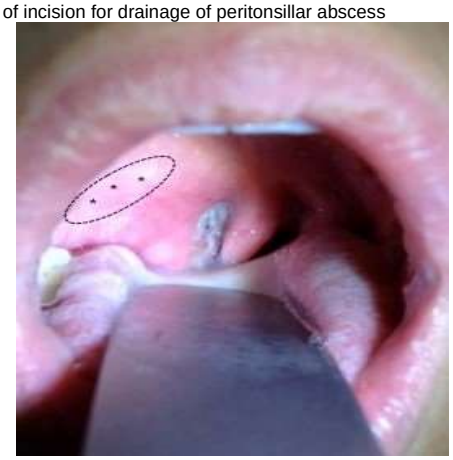
All patients were on oral treatment including antibiotics and pain killers but symptoms didn't improve or worsened so after hospital admission, intravenous antibiotics (Co-amoxyclav 1.2 gm 8 hourly and if sensitive then Cefuroxime 750 mg 8 hourly), pain killers, steroids, Intravenous fluids for hydration and antiseptic gargles started for all these patients. Detailed history and clinical examination recorded. In symptomatology, special considerations were for odynophagia, trismus, torticollis and drooling of saliva along with pain throat, muffled voice, fever, cervical lymphadenopathy. Past history of repeated sore throat, attack of quinsy before, medical ailment recorded. Complete blood count (CBC), throat swab for culture sensitivity, pus from aspiration for culture sensitivity sent for all cases. Needle aspiration group: Drainage of abscess was attempted with wide bore needle attached to 10 ml syringe under 10% lignocaine spray[12], through lateral to upper tonsillar pole. In those cases where trismus was marked and syringe couldn't enter in oral cavity, then lumbar puncture needle attached to syringe and aspiration done.

Incision and drainage group: Incision and drainage of peritonsillar abscess done only in those cases which were confirmed by needle aspiration but pus so thick and viscous that could not be aspirated fully or swelling did not subside or there was collection again next day even after aspiration and intravenous antibiotics, so in these cases under local anaesthetic spray, an incision made on most bulging point or classical site (vertical imaginary line along anterior pillar and horizontal line from base of

uvula. Where these lines cross, curvilinear incision just lateral to this point) with guarded knife and incision enlarged with sinus forceps to drain whole abscess (Fig.1).

Discharge criteria was significant improvement in clinical presentation both subjectively and objectively including improvement in swallowing, no more drooling, trismus, afebrile and torticollis vanished with noticeable decrease in pain and voice almost normal. On oropharyngeal examination, no more swelling and significant decrease in congestion of tonsils were noted, so hospital stay along with repeat incision and drainage after recollection after 24 hours or need to drain it under general anaesthesia or any complications of these procedures were taken inconsideration. The data was entered and analyzed through SPSS-25.

Fig.1: Site of incision for drainage of peritonsillar abscess



RESULTS

There were 88 (65.2%) males and 47 (34.8%) females (Table 1). Length of hospital stay ranged from 1 to 4 days (Table 2). Majority of patients were discharged on second day of admission in both groups. In needle aspiration group (65 patients), 64 patients were discharged till second day (8 on 1st day and 56 on 2nd day) and only one patient had to stay in hospital till 3rd day so 98.46% recovered from acute ailment in 2 days making it 78.57%. In incision/drainage group (70 patients), 55 patients discharged till 2nd day (3 on 1st day, 52 on 2nd day and 12 on 3rd day with only 3 left admitted till 4th day of admission). Re-aspiration in 35 patients and 12 patients underwent 3rd aspiration. The presentation of clinical symptoms was shown in Table 3.

Pus either aspirated or drained from all patients sent for culture and sensitivity. Streptococcus species dominated the results with isolation in 79(58.5%) patients with Streptococcus pyogenes in majority of samples (59) while Streptococcus viridans in 15 samples followed by Streptococcus penumoniae in 5 patients. Staphyloccus aureus in 28 (20.7%), Bacteroides in 14 samples while 14 samples revealed no organisms. Klebsiella pneumoniae in 3 samples were found. Mostly bacteria isolated, were sensitive to amoxycillin and clavulonic acid/ cefuroxime (Tables 4-5).

Table 1: Frequency of genders (n=135)

Gender	No.	%
Male	88	65.2
Female	47	34.8

Table 2: Comparison of age and hospital stay in both groups (n=135)

Variable	Needle aspiration (n=65)	Incision & drainage (n=70)
Age (years)		
15-20	11	15
21-30	30	34
31-40	13	18
41-50	8	2
51 68	3	1
Hospital Stay (days)		
2	1	15
3	56	52
4	8	3

Table 3: Presenting clinical features of patients

Clinical features	No.	%
Pain throat	118	87.0
Odynophagia	101	75.0
Drooling of saliva	95	70.0
Congested tonsils	135	100.0
Hot potato voice	98	72.0
Trismus	87	64.0
Neck pain/Torticollis	66	49.0
Fever	135	100.0
Otalgia	58	43.0
Deviated uvula	135	100.0

Table 4: Frequency of positive culture

Positive sample	No.	%
Streptococcus species	79	58.5
Staphylococcus aureus	28	20.7
Bacteroides	12	8.9
Negative culture	13	9.7
Klebsiella pneumonia	3	2.2

Table 5: Sensitivity of bacteria

Antibiotic sensitivity	Streptococcus species	Staphylococcus aureus	Bacterioides	Klebsiella pneumonia
Amoxicillin+ clavulonic acid	79	28	12	3
Ceuroxime	79	28	14	3
Azithromycin	68	25	10	1

DISCUSSION

Peritonsillar abscess is usually presented as an emergency in casualty department or otolaryngology clinic with history of sore throat and fever from last few days with inadequate/no treatment at all, over the counter medication, opting to go to quacks and traditional remedies which not only delay diagnosis but can result in spontaneous rupture of abscess. On worsening of symptoms, patients report to hospital and seek expert opinion. This is major reason for low prevalence of PTA (0.2%) mentioned in studies.[5] It is major chunk of head and neck space infections. All the 135 patients included in study were adults and put on intravenous antibiotics and analgesics (NSAIDS). Total number of patients were remarkably less, only 18 patients in 3 years[1] and 182 patients (in 6 years duration)[4] while in present study we came across 135 patients in 2 years duration. The duration of hospital stay in both groups was from 1 to 4 days. Majority of patients were discharged on 2nd day after admission depending upon tremendous improvement in clinical presentation of the disease like afebrile, trismus and torticollis improved with proper oral intake and oropharyngeal swelling decreased. Peritonsillar abscess is disease of young adults mainly between age group of 20-40 years in present study and the age distribution was peaked at 3rd decade and lowest was above 40 years[5,9,11]. High incidence was noticed in males (65%) in comparison to females (35%) as mentioned in other studies, in contrast to study which showed female preponderance over males.[5]Duration of symptoms from start of symptoms to hospital admission was (4.2±3) day which is noticed in other study as wel.[15]

Common findings of PTA were congested tonsils, deviated uvula with pain throat and odynophagia. Fever in all patients

included in study as compared to study in which only 25% of study participants had fever[10] and 38.9%.[1]Though classic symptoms of trismus, muffled voice and uvular deviationwere noted in our study as well along with odynophagia. Aspirates sent for culture yielded streptococcus growth in 62% of samples and staphylococcus in 22% as mentioned in other studies also.[10,16]

Still it is debatable to choose or recommend a treatment of choice for peritonsillar abscess but once diagnosis established then no option for conservative management except to remove the pus from peritonsillar space. No studies support medical therapy as primary treatment of this disease.[17] Needle aspiration is preferred by majority of people and in present study also found it quite effective with outcomes like relief of symptoms, hospital stay. Same was noted by Mehanna that 60% of respondents favoured first line needle aspiration, 25% incision and drainage, 1% abscess tonsillectomy and 5% interval tonsillectomy.[18] In present study no recurrence case reported but the trial by Stringer et al[17] randomized patients, 8% in aspiration group and 7% in incision and drainage group was recurrence rate.

CONCLUSION

Still no consensus in literature about definitive management of peritonsillar abscess but this is agreed that drainage is must with no role of medical/conservative treatment, once diagnosis is established which is mostly clinical. In our study hospital stay and relief of symptoms was comparable with incision and drainage, early discharge from hospital in incision and drainage group. Re-aspiration is required in a number of patients but same can be observed in incision & drainage group as reopening of incision and abscess/hot/quinsy tonsillectomy is not recommended due to per-operative and postoperative complications.

Conflict of interest: Nil

REFERENCES

1. Aliyu D, Yikawa SS. Quinsy in adult: clinical profile and management challenges in two tertiary Hospitals Northwest Nigeria. Asian J Med Health 2019; 15(3): 1-7.
2. Kowalska B. Assessment of the utility of ultrasonography with high-frequency transducers in the diagnosis of posttraumatic neuropathies. J Ultrason 2015; 15(60): 15-28.
3. Kim SY, Lim H, Choi HG. Smoking & alcohol consumption are associated with increased risk of peritonsillar abscess. Laryngoscope 2020; 103(12): 2833-8.
4. Mansour C, De Bonnecaze G, Mouchon E, Gallini A, Vergez S, Serrano E. Comparison of needle aspiration versus incision and drainage under local anaesthesia for the initial treatment of peritonsillar abscess.
5. Adegbiji WA, Olajide GT, Adebayo AAA. Clinical profile and management of peritonsillar abscess in a Sub Saharan Africa. IJIRMS 2020; 5(1):
6. Khan MA, Ahmed A, Khan M. Comparison of early versus interval tonsillectomy in cases of peritonsillar abscess. Life Sc 2020; 1(1): 23-7.
7. Zhao X, Delaney M, Breslin K, Chamberlain JM, Rubio EI, Reilly BK, Cohen KS. Impact of transcervical ultrasound for the diagnosis of pediatric peritonsillar abscesses on emergency department performance measures. J Ultrasound Med 2020;39(4):715-20.
8. Saber CN, Klug TE. Post-operative hemmorrhage after acute bilateral tonsillectomy in patients with peritonsillar abscess: prevalence, treatment, risk factors, and side of bleeding. Acta Otolaryngol 2020; 140(1): 66-71.
9. Gilberto N, Almeida G, Correia F, et al. Lesser palatine nerve block in peritonsillar abscess drainage: a prospective and control study. SN Compr Clin Med 2019: 1: 831-6.
10. Sowerby LJ, Hussain Z, Husein M. The epidemiology antibiotic resistance and post .op discharge course of peritonsillar abscess in London, Ontario. J Otolaryngol Head Neck Surg 2013; 42: 42-5.
11. Galioto NJ. Peritonsillar abscess. Am Fam Physician 2017:95(8):501-6.
12. Roberts JR. Otolaryngologic procedures: clinical procedures in emergency medicine. 5th ed. Philadelphia: Saunders, 2010; 1197-215.
13. Jankowska K, Smiechura-Ganczarczyk M, Konopka W. Jednostronneguzymigdalkapodniebiennego-opisprzypadku. Otolaryngologia 2018:17(1):36-40.
14. Shah J, Patel S, Singh B. Gardlo I przelyk. [W] Chirurgia I onkologiaglowy I szyi. Tom I. Elsevier Urban & Partner, Wroclaw 2014:287-289.
15. Menezes AS, Ribeiro DC, Guimaraes JR, Lima AF, Dias L. Management of pediatric peritonsillar and deep neck infections- cross- sectional retrospective analysis. World J Otolaryngol Head Neck Surg 2019,5: 207-14.
16. Almutairi D, Alqahtani R, Alshareef N. et al. Deep neck space infections: a retrospective study of 183 cases at a tertiary hospital. Cureus 2020, 12 (2): e6841.
17. Alamri AA, Alsheikh M, Alenzi SH. et al. Peritonsillar abscess management: A literature review comparing different approaches of PTA drainage. Int J Med Surg 2018, 5(r): 1-7.
18. Mehanna HM, Al-Bahnasawi I, White A. National audit of the management of peritonsillar abscess. Postgrad Med 2002:78, 545-8.