Management Strategies of Peritonsillar Abscess in the Tropics: A Survey of Surgeons' Preference

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Abstract Peritonsillar abscess (PTA) or Quinsy is one of the common abscesses of the head and neck that requires urgent attention. Its treatment may often require hospital admission. Needle aspiration, incision & drainage and tonsillectomy have been the various treatment policies available depending on surgeon's preference. We present a survey of current practices in the management of PTA of practicing ENT surgeons in Nigeria. Questionnaires were mailed to members of the Otorhinolaryngological Society of Nigeria (ORLSON). Of the 60 surgeons surveyed, 56.7 % advise tonsillectomy in patients with history of recurrence, 20 % when there is previous history of tonsillitis and 23.3 % in patients with single attack of PTA. Overall 96.7 % of surgeons advises interval tonsillectomy and only 3.3 % advice abscess/quinsy tonsillectomy. There is paucity of literature on PTA in the tropical region, the survey therefore serves as a baseline information for further research especially outcome based in order to establish a standard criteria for choice of a treatment policy in our region. We suggest maintaining the policy of interval tonsillectomy in the appropriate patients for the time being.

Keywords Peritonsillar abscess ·
Management strategies · Surgeons' preference · Tropics

Introduction

Peritonsillar abscess (PTA) also known as Quinsy is a mixed bacterial infection leading to pus collection in the tissues around the palatine tonsil. It is usually preceded by peritonsillar cellulitis. Quinsy and peritonsillitis are common throat emergencies and is the most common head and neck abscess. The incidence in tropics is not known but may be higher than the temperate region due to high rate of infections endemic in the region. In Europe, 41 cases per 100,000 population was the estimated annual mean incidence [1]. PTA most commonly occurs in the third and fourth decades of life. Pediatric cases are more common in children older than 10 years and about 25–30 % of PTA are in paediatric patients [2].

Peritonsillar cellulitis always marks the onset of quinsy, if not properly treated abscess develops. Abscess may form at the superior, midpoint, inferior pole of the tonsil or form multiple loculi within peritonsillar space. Abscess collection in the loose connective tissue of the supratonsillar fossa was thought to develop from direct spread of infection from poorly treated bacterial tonsillitis or as an abscess formed in the salivary glands of Weber in the supratonsillar fossa. Ipsilateral jugulodigastric nodes are echelon lymph nodes. Polymicrobial aerobic and anaerobic bacteria are usually cultured. Over 90 % of cultures yielded anaerobic bacteria and 25–40 % of specimen will yield group A beta-hemolytic streptococci [3]. patient presents with deviation of the tonsil and uvula towards the midline, swelling of soft palate often with trismus. It may be complicated by venous thrombosis, phlebitis, bacteremia and endocarditis [4].

Careful clinical history and appropriate thorough physical examination often may lead to diagnosis, however ultrasonography (transcutaneous or transoral) and computerized tomographic (CT) scan may confirm the diagnosis of PTA

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[5, 6]. When abscess is suspected, the surgeon can perform needle aspiration which is diagnostic and may be therapeutic at the same time (Tables 1, 2, 3).

Peritonsillar abscess and peritonsillitis are two more common deep space infections of the head and neck that usually requires hospitalization for resuscitation before definitive treatment. Intravenous antibiotics, parenteral fluids and analgesics are administered before any interventional procedures are rendered.

Needle aspiration, incision and drainage, abscess (quinsy) tonsillectomy, interval tonsillectomy and combination of any of the above are some of the surgical modalities employed in the management of this condition. Several studies compared some of this procedures [7–9]. The varied modalities available for the management of PTA made this study apt. We present a survey of current practices in the management of PTA of practicing ENT surgeons in Nigeria.

Methodology

This is a survey of the current management policy of PTA among practicing ENT surgeons in Nigeria. Questionnaires were mailed to members of Oto-Rhino-Laryngological

Society of Nigeria (ORLSON). Of the sixty (total number of email address on the mailing list of the society's secretary general) questionnaires emailed across the country, 30 were duly filled and returned. The questionnaire seeks to establish the treatment strategies of PTA adopted by the surgeons. Responses of practicing ENT surgeons practicing in Nigeria were the only ones evaluated. Statistical package for social sciences (SPSS) version 15 was used for the analysis.

Results

A total of 30 ENT surgeons practicing in Nigeria responded to our questionnaires, 28 were males and 2 were females. Only 6.67 % of surgeons are females (Fig. 1).

Twenty-two (22) surgeons constituting 73.4 % of respondents had working experience of 0–10 years. Otorhinolaryngology is relatively a new specialty in Nigeria that is why we had only 2 (6.7 %) respondents with more than 20 years experience.

Majority of the surgeons (93.3 %) practice in tertiary hospitals while 2 (6.7 %) of them practice in secondary health facilities. None was from a primary health care centre (Fig. 2).

To assess the rate at which PTA are seen we asked the surgeon to indicate whether they see cases frequently or not. About 87 % (26) of surgeons reported that it was not frequent (Fig. 3).

Combination here refers to the combination of any of the following treatment modalities; aspiration, I & D and

Table 1 Distribution of surgeons by years of experience

Experience in years	Frequency	Percent
0–5	11	36.7
6–10	11	36.7
11–15	4	13.3
16–20	2	6.7
>20	2	6.7
Total	30	100.0

Table 2 Treatment policies

Options	Frequency	Percent
I & D	2	6.7
Combination	28	93.3
Total	30	100.0

Table 3 Type of tonsillectomy offered

Tonsillectomy type	Frequency	Percent
Interval	29	96.7
Abscess	1	3.3
Total	30	100.0

Fig. 1 Distribution of surgeons by gender

tonsillectomy. Tonsillectomy could be interval or abscess tonsillectomy. Only about 7 % of surgeons treat by means of incision and drainage (I & D) exclusively. All others employ combination of the available modalities as explained above.

Fig. 2 Distribution by level of health facility

Fig. 3 Frequency of peritonsillar abscess

About 57 % of surgeons would do tonsillectomy after a recurrence of PTA after aspiration or I & D, 20 % will do tonsillectomy if there is previous history of tonsillitis while 23 % offer tonsillectomy with single attack (Fig. 4).

Almost 97 % of surgeons do offer interval tonsillectomy.

Discussion

There is paucity of information on PTA in this part of the world. The incidence and prevalence in both adult and paediatric populations in Nigeria are not known, however, it still remain one of the common cervical deep space abscess that require emergency intervention.

Of the 60 questionnaires sent to members of ORLSON, 30(50 %) ENT surgeons practicing in Nigeria responded. Ninety three per cent of the surgeons are males and 7 % females with 73.4 % having ≤ 10 years working experience as consultants, 93.3 % practice in tertiary health facility. Only 6.7 % practice in secondary centers and none in primary health care clinics, perhaps this may explain why 87 % of surgeons reported that peritonsillar abscess is not seen frequently by them. Majority of patient will seek medical care in the nearest health facility which is likely to be a primary health center. This means that majority of otolaryngologist will be seeing recurrent or recalcitrant cases that fail to respond to primary and/or secondary care. Though this still remains our observation since there is no

Fig. 4 Distribution by indication for tonsillectomy

study that proved so. In UK the incidence is 46 per 350,000 population per year and 3 per 350,000 population per year for adult and paediatric populations respectively [10].

Various treatment policies of PTA have been reported which include needle aspiration, incision & drainage and tonsillectomy. Different recurrence rates have been documented for the different policies. In this survey none of the surgeon treats patient with aspiration alone this agrees with the approach of Raut and Yung [10] who treated all their patients with at least I & D at presentation. This study recorded 6.7 % of respondents adopts the policy of treating patient by I & D alone while 93.3 % employed combination of all approaches; i.e. I & D and tonsillectomy either interval or abscess tonsillectomy. The reason for tonsillectomy in almost all patients is not exactly known but it may be due to high rate of infections in the tropics, therefore whenever there is evidence of infection or abscess the aim is to have total eradication.

Of the 30 surgeons surveyed, 20 % said they will offer tonsillectomy to all patients with previous history of tonsillitis while 23 % will advise tonsillectomy to even patients with single attack of PTA. About 57 % of the surgeons said they will advise tonsillectomy when there is history of recurrence. Irrespective of the indication for tonsillectomy 96.7 % of surgeons said they will advise interval tonsillectomy claiming that it has lower risk of complications especially haemorrhage and chances for dissemination of infection. This finding is slightly higher than the findings of Raut and Yung [10] who reported 83 % of surgeons advised interval tonsillectomy in UK. This is because infection is still an issue in this part of the world when compared to the UK; therefore all infections must be addressed squarely. Only 3.3 % advises quinsy/abscess tonsillectomy arguing that this is more cost effective and shortens hospital stay.

This survey forms a baseline information for further studies especially outcome based studies where PTA criteria for what is to be done to what patient at what time for our country will be determined. Meanwhile we suggest that the policy for interval tonsillectomy especially among patients with recurrence be uphold.

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