Original Research Article

QUINSY IN ADULT: CLINICAL PROFILE AND MANAGEMENT CHALLENGES IN TWO TERTIARY HOSPITALS NORTHWEST NIGERIA.

Abstract:

Purpose of the study:
Quinsy also known as Peritonsillar abscess (PTA) is a life threatened complication of acute exudative tonsillitis requiring immediate surgical intervention. We profile the clinical presentation and highlight challenges in management.

Materials and Method:
A retrospective analysis of all patients diagnosed with Quinsy at the departments of otorhinolaryngology of two-government referral hospital in northwest Nigeria from May 2014 to April 2017. These patients' clinical records were retrieved from the health record department and data extracted were analyzed using Microsoft excel program.

Results:
A total of 147 adult patients had tonsillitis within the study period. Only eighteen patients with quinsy 13(72.2%) females and 5(27.8%) males with an M: F=1:2.6 were analyzed. Age range is between 18 years – 58 years with a mean age of 35.4 years. The highest incidence was 66.7% in patients within the age group 21-40 years. Odynophagia and trismus were the commonest presenting features in all the patients. Side of Quinsy involvement was on the left tonsils 12(66.7%). There was spontaneous rupture in 5(27.8%) while 13(72.2%) of patients had incision and drainage. All patients had broad-spectrum antibiotics. Interval tonsillectomy was carried out on 12(66.7%) of patients while 6(33.3%) of patients did not consent for tonsillectomy and were subsequently lost to follow up. No recurrence of symptoms or mortality recorded.

Conclusion:
Quinsy is a life threatening otorhinolaryngological emergency common amongst young female adults. Optimal management is still antibiotics therapy and drainage of abscess in our center.

Key Words: Quinsy, Peritonssillar abscess, Complication, Odynophagia, Tonsillectomy

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1. INTRODUCTION

Quinsy an old term also known as Peritonsillar abscess (PTA) is an accumulation of pus in the potential space between the capsule of the tonsil and the pharyngeal constrictor muscle [1,2]. It is the most common deep neck space abscess and a common cause of ENT admissions worldwide, with significant morbidities and occasionally mortality [3-5]. Complications that could arise from peritonsillar abscess are; aspiration of purulent material, extension to contiguous deep neck spaces with eventual mediastinitis, septicemia and airway obstruction [6-8]. The later can rapidly lead to death if left unattended. Quinsy affects all age groups but peaks in the second and third decades of life [9-11].

Despite its common occurrence, its aetio-pathogenesis is still a source of debate [1]. It has been thought to arise as a result of complicated acute tonsillitis (AT) [1,3,5,11]. Proponents of this theory argue that infection arising from the mucous membrane of the tonsil give rise to peri-tonsillitis which progress to give rise to tissue necrosis and abscess formation [1, 10,12]. This theory has however been faulted for several reasons. The epidemiology of AT is different from that of PTA in some aspects [13, 14]. The peak age of presentation of acute tonsillitis varies from that of PTA, which peaks in the second and third decade of life [10, 11]. The AT theory does not explain the microbiologic changes within the substance of the tonsil, and the fact that PTA also occurs in patients without prior AT or recurrent tonsillitis [1, 15].

The most widely accepted theory now is that of PTA arising from inflammation and subsequent suppuration of the Weber's salivary gland [1, 5,13,16]. The Weber's salivary gland is situated at the superior pole of the tonsil, and has its common duct drain through the capsule of the tonsil into the tonsillar crypts. Blockage of the duct leads to inflammation with subsequent changes that lead to suppuration of the peritonsillar tissues with accumulation of pus in the peritonsillar space [1,13]. This theory best explains the epidemiology and aetio-pathogenesis of PTA. Microbiology of PTA is polymicrobial, but in some instances may be monomicrobial [1,15,17,18]. Group A Streptococci (GAS), and *Fusobacterium Necrophorum* are common organisms isolated from aspirates of patients [1,3,18,19].

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Patients with PTA may present with sore throat, odynophagia, fever, otalgia, trismus, muffled voice, and halitosis or airway obstruction. Diagnosis is mostly clinical from history and classical examination findings of medialization of the tonsils, contralateral deviation of the uvula, hyperemia of the pharyngeal mucosa, inflamed jugulo-diagastric lymph nodes among others [9,11]. In a few patients, PTA may be bilateral, and the classical features on examination may not be easily identified. Diagnostic difficulty may also arise in patients whose oral cavity cannot be adequately examined for various reasons [20]. In these cases, diagnosis may be aided by a CT Scan or Ultrasound scan. In settings where there are constraints of resources, a CT Scan may be a luxury, the patient may sadly not be able to afford. This places a lot of burden on the clinical skills of the attending clinician.

Medical management, Needle aspiration (NA), Incision and drainage (I&D) and Quinsy tonsillectomy can all be employed in treating PTA [8,21-24]. Over time the trend has moved from the more aggressive methods like quinsy tonsillectomy to more conservative methods such as treatment with medications alone [2,7]. Quinsy tonsillectomy is removal of the tonsils at the time of PTA [8,21]. Proponents for this treatment modality argue that, removal of the whole tonsil will lead to complete evacuation of the pus and give rapid relief of symptoms [8]. The overall hospital stay is also shortened, as patients don't need a second hospital admission for interval tonsillectomy or another drainage for PTA. Also dissection is easier, as the pus itself helps to create a plane between the tonsil and its bed. Needle Aspiration and I&D have similar response rates and outcomes, though theoretically, Needle Aspiration may have more recurrence rates than incision and drainage [8].

Medical management with antibiotics, analgesics, hydration and steroids is now being favored by many authors [2]. They argue that less invasive methods still work, and anti-inflammatory agents reduce the inflammatory process, leading to faster recovery. However patients may need to be carefully selected for this treatment modality. In environments where patients come to the hospital only as a last resort, and are easily lost when the first treatment modality doesn't appear to work, medical management may not be advocated. This study aims to present the clinical profile and to highlights management challenges of peritonsillar abscess observed in two tertiary hospitals in Northwestern Nigeria.

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2. METHODOLOGY

This was a retrospective study of records of all patients that presented to the ENT department of two tertiary hospitals (Usmanu Danfodiyo University Teaching Hospital Sokoto and Specialist Hospital Birnin Kebbi) in Northwestern Nigeria with peritonsillar abscess from May 2014 to April 2017 Medical records of patients who were clinically diagnosed with peritonsillar abscess presenting to the Centres during the period under review were retrieved, and relevant data extracted. Data was analyzed using Microsoft Excel program.

3. RESULTS

3.1 Demographics

A total number of 147 Adult patients with tonsillitis were seen within the study period of which 18 patients with quinsy were recruited for this study. Out of this, 13 (72.2%) were females, while 5 (27.8%) were males, with a Male to Female ratio of 1: 2.6. The ages of patients ranged from 18 to 58 years, with a mean age of 35.4 years. See [Table 1].

Table 1: Age distribution of patients

S/No	Age Group (Years)	Females	Males	Total (%)
1	0 – 20	1	-	1 (5.6)
2	21 – 40	9	3	12 (66.7)
3	41 – 60	3	2	5 (27.7)
4	Total	13	5	18 (100)

3.2 Clinical Presentation

All patients presented with Odynophagia, followed by Trismus in 83.3% of patients. See table 2. Thirteen patients (72.2%) presented with a prior history of tonsillitis, while 5 (27.8%) patients did not have a prior history of tonsillitis.

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Table 2: Symptoms patients presented with.

S/No	Symptoms	Number of patients	Percentage
1	Odynophagia	18	100.0
2	Trismus	15	83.3
3	Neck Pain	12	66.7
4	Dysphagia	10	55.6
5	Headache	9	50.0
6	Muffled voice	8	44.4
7	Fever	7	38.9
8	Epigastria Pain	5	27.8

All patients presented with unilateral PTA, 5 of them came at an advanced stage, with already ruptured abscesses. The left sided PTA accounted for 66.7% of cases. See [Table 3].

Table 3: Side of involvement

S/No	Gender	Right	Left
1	Females	2	11
2	Males	4	1
Total (%)		6 (33.3)	12 (66.7)

3.3 Diagnosis and Treatment

Diagnosis in all patients was clinical. The 5 patients who presented with ruptured PTA were managed medically with antibiotics, analgesics, mouth gaggles, and steroids. Patients were given parenteral antibiotics (Ceftriaxone and Metronidazole) for 48 to 72 hours and thereafter converted to oral Augmentin (Amoxicillin/Clavulanic acid) and Metronidazole. The remaining

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13 patients had a test needle aspiration to confirm the diagnosis of PTA. These patients had Incision and drainage done and were thereafter commenced on medical treatment as above. All patients were thereafter scheduled for interval tonsillectomy and 12(66.7%) had the surgery while 6(33.3%) did not consent for tonsillectomy and were however lost to follow up. The over all mean duration of hospitalization was 4.8days (Range 1-14days). No mortality recorded in this study.

Table 4: ***Surgical treatment and spontaneous drainage of PTA.***

S/no.	Surgical treatment and spontaneous drainage	Number of Patients
1	Incision and Drainage	13
2	Interval Tonsillectomy	12
3	No consent for Surgery	6
4	Spontaneous Rupture	5

4. DISCUSSION

A total number of 18 patients were observed in our Centre during the 3 years studied. This is not surprising as the health seeking behavior of patients in our environment is poor. The fact that 5(27.8%) of the patients had to wait for the abscess to rupture before presenting to the hospital further buttresses this fact. Most patients see orthodox healthcare as a last resort, and even if they feel constraint to take orthodox drugs, they will rather get those drugs over the counter than come to the hospital to see a doctor let alone an ENT Surgeon. The increase rate of self-medication, treatment from private clinics may be attributed to delay in presentation and the small size of patients in this study. This may be the reason all patients were on antibiotics before presenting to the hospital. It is likely that some cases of PTA got resolved with such antibiotics therefore patients may not see the need for further care in the hospital. Several factors are responsible for this poor health seeking behavior especially in developing countries, most

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notable is lack of resources to fund healthcare. This is so because most patients in our environments pay for healthcare out of pocket, and for the few that have health insurance, the often-difficult bureaucratic processes in accessing healthcare discourages them. These poses a great challenge to the otolaryngologist in the management of this condition.

The mean age in this study was 35.4 years. This agrees with the fact that PTA is common among Adolescents and young adults [9, 11]. Risberg and colleagues in a retrospective review over three years in Sweden also had similar mean age (31.2 years) [10]. Other authors reported a similar mean age [11, 25]. We had no child that presented with PTA among our patients during the study period. Children also present with PTA, but the incidence among them is low, with older children being the majority [4, 26]. Majority of our patients (72.2%) were females. This is at variance with what is commonly observed [8, 9,11]. Other studies reported no significant difference in the prevalence among males or females [10, 25]. However, Segal and colleagues in a study of PTA among 126 children in Jerusalem observed a female preponderance of 56.4%.

All patients in this study presented with odynophagia. The second most common presentation was trismus. Fever was seen among 38.9% of the patients. This may not be unconnected with the prior use of antibiotics among the patients in this study. Souza and colleagues reported sore throat as their most common symptom [9]. Odynophagia is sometimes used interchangeably with sore throat, though they are distinct entities. Fever is a more common symptom among younger children [4, 26].

Five patients (27.8%) did not have a prior history of tonsillitis in this study. This is similar to findings by Marom and colleagues [25]. It would have been expected that if PTA arises as a complication of AT all our patient should have had a prior history of AT. Only 36% of patients had previous tonsillar infection among a pediatric population [26]. Mazor and colleagues in a retrospective review of PTA cases treated at a regional hospital in Radom Poland, among 111 patients reported a previous history of tonsillitis among 35.5% of their patients [11]. We observed that 66.7% of patients had left sided PTA. Other authors observed no difference between either sides [25,26].

Five of our patients presented with spontaneous rupture of PTA a life threatening complication. There is a high risk of aspiration, lung abscess, aspiration pneumonia and deep neck space infection associated with spontaneous rupture of PTA, however none of our patient develop any

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of these complications. No further drainage was required for these patients. They were commenced on antibiotics, mouth gaggles for toileting and other medical treatment.

It is a well-established fact that broad-spectrum antibiotics show advantage over single antibiotics in the management of PTA [27]. Our choice of antibiotics is Intravenous Ceftriaxone and Metronidazole for the first 48 to 72 hours. This is because of the polymicrobial nature of aspirates in our environment, and the good tissue penetration of Ceftriaxone [1]. Other authors prefer to use Penicillins as their first line [23]. We rather use Ceftriaxone because we are concerned about immunologic complications of GAS, and will want a drug that can clear it as much as possible [1,3,15,17,18]. Immunologic complications of GAS are not much of a problem is some developed countries as it is in our environment [23]. Augmentin is used by some authors with caution in AT because Infectious mononucleosis is a differential of AT. Amoxicillin can give rise to maculopapular rash in patients with infectious mononucleosis [3]. We routinely use Augmentin for AT and PTA patients when converting them to oral medications and we have not recorded any case of rash. Marom and colleagues also reported the routine use of Amoxicillin/Clavulanic acid for their patients [25]. Some in the management of PTA also advocates Clindamycin, Ceftriaxone combination [8].

The choice of any surgical technique is still debatable as no consensus on the available options. Although many authors [25,27] reports the choice of needle aspiration as being less invasive, cost effective and convenient, our patients with unruptured PTA, had I & D, and thereafter were scheduled for interval tonsillectomy [Table 4]. We adopted this method because of the peculiarities of our environment one of which is the need for repeat needle aspiration due to recurrence that mostly results from noncompliance to appropriate Medical treatment. Knowing that patients may not opt to return to the hospital when they have recurrence we prefer to offer them I&D, which is associated with less recurrence. Though quinsy tonsillectomy has been shown to be safe [21], and will be more apt in this circumstance, majority of our patients had interval tonsillectomy, which is usually 4-6 weeks after incision and drainage. We therefore advocates the need for proper health education on the life threatening complications associated with PTA and the choice of interval tonsillectomy in averting this dangers.

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5. Limitation of this Study.

The small sample size in our study may not reflect the actual pattern of Quinsy in our region as compared with studies in other parts of the world.

6. CONCLUSION

This study observed a lower number of PTA patients as compared to other studies. We also observed a female preponderance among our patients, with a mean age of 35.4 years. Odynophagia followed by Trismus were the most common symptom. Spontaneous rupture of PTA was the only potential life threatening complication reported in this study. All patients were clinically diagnosed and subsequently managed as in-patient with antibiotics, incision and drainage in 72.2% of patients and interval tonsillectomy in 66.7%.

We therefore recommends the need for a multicenter research to determine the actual pattern of PTA in our environment; adequate funding of health care institutions for the provision of affordable, accessible services and the need for proper health education on the life threatening complications associated with PTA.

COMPETING INTEREST

Authors have declared that no competing interests exist.

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