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CASE REPORT

Bilateral peritonsillar abscess in pediatric age: a case report

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ABSTRACT

Background: Bilateral peritonsillar abscesses are a rare occurrence in children. Peritonsillar abscess is characterized by the pushing of the tonsils forward and toward the uvula. Untreated acute tonsillitis can lead to the development of peritonsillar abscesses as an early complication.

Case Presentation: The study presents a rare case report of a 5-year-old male with no prior medical conditions presented with a history of fever (38.5°) and a runny nose for the past 2 days. No abnormalities were observed in chest, cardiovascular, abdominal, or central nervous system examination. Nevertheless, the tonsils appeared to be pushed by a mass and the uvula deviated. Computed tomography revealed enlarged bilateral palatine tonsils with a few small peritonsillar abscesses measuring 0.7 cm. Thus, bilateral palatine tonsillitis with few peritonsillar small abscesses associated with multilevel cervical lymphadenopathy was diagnosed.

Conclusion: The emphasis of the report is the importance of considering peritonsillar abscess as a differential diagnosis when encountering a child with previously reported clinical presentations and characteristics, as in the aforementioned case.

Keywords: Abscess, peritonsillar, lymphadenopathy, tonsils, pediatric, case report.

Introduction

Untreated acute tonsillitis can lead to the development of peritonsillar abscesses as an early complication. Peritonsillar abscess is characterized by the pushing of the tonsils forward and toward the uvula. The clinical presentations of the patients include fever, sore throat, dysphagia, odynophagia, otalgia, trismus, and oral drooling [1]. Moreover, peritonsillar abscesses affect 30 per 100,000 people in the United States [2]. Unilateral peritonsillar abscesses are commonly observed; however, bilateral peritonsillar abscesses are considered rare [3]. Peritonsillar abscesses can occur in all age groups, but it is more commonly observed in adolescents and young people [4]. A study conducted in Riyadh, Saudi Arabia, reported that the mean age of patients with peritonsillar abscesses was 22 years [5]. Nevertheless, all of the cases reported in the study of Saudi Arabia were unliteral peritonsillar abscesses, and none had bilateral involvement. This also supports the rarity of bilateral peritonsillar abscesses. Therefore, the study presents a case report of a bilateral peritonsillar abscess in a pediatric patient in Riyadh, Saudi Arabia.

Case Presentation

A 5-year-old male with no medical history presented with a history of fever (38.5°) and runny nose for the past 2 days. The patient was known to have a runny nose and febrile illness almost every 2 months as reported by the mother. Furthermore, the mother noticed a swelling on the right side of the patient's face. The patient had one episode of vomiting that was yellowish, along with dysphagia and sore throat in the past 2 days. No history of weight loss, night sweats, rashes, diarrhea, shortness of breath, cough, cyanosis, or loss of consciousness.

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Upon physical examination, the patient looked well and was not in distress he was active and moving, with no cyanosis, jaundice, or rash. In addition, no evidence of dysmorphic features was observed. Examination revealed bilateral air entry with no added sound. The abdomen was soft and lax with no organomegaly or tenderness. No abnormalities were identified in chest, cardiovascular, abdominal, or central nervous system examination. Upon eyes, nose, and throat examination, the tonsils were pushed by a mass and the uvula deviated. Nose congestion was also present in the patient along with moist mucous membranes, and a mass in the palate with pharyngeal swelling. However, no tonsillar exudates or abscesses were observed. The tympanic membranes of the right and left ears of the patients were erythematous and normal, respectively. In the patient, submental, submandibular, and tonsillar adenopathies were also observed, in addition to superficial and deep cervical adenopathies. Moreover, no preauricular, posterior auricular, occipital, supraclavicular, axillary, or inguinal adenopathy was observed on either side. The final recorded vital signs of the patient were as follows: blood pressure, 108/63; pulse, 104; temperature, 36.7°; respiratory rate, 24; and oxygen saturation, 98%.

Several investigations were performed, the results of which included a white blood cell count of 22, neutrophils of 78, and other labs that were unremarkable. Point-of-care ultrasound displayed multiple lymph nodes, while radiographs of soft tissue were normal. Thus, head and neck computed tomography (CT) with contrast was requested and performed to rule out suspected differentials such as malignancy or lymphoma. CT displayed enlarged bilateral palatine tonsils with few small peritonsillar abscesses the largest measuring 0.7 cm, surrounding fat stranding, and soft tissue swelling with a left-sided mass effect on the oropharynx; however, the airway was patent. Thickening and enhancement of the soft palate on the right side. In the patient, multiple enlarged cervical lymph nodes are also observed. Near total pacification of the bilateral maxillary sinuses with obliteration of the ostiomeatal complex and partial pacification of the ethmoid and sphenoid paranasal sinuses were discovered. The impression, therefore, was bilateral palatine tonsillitis with a few peritonsillar abscesses associated with multilevel cervical lymphadenopathy. Regarding management, the patient received three doses of dexamethasone and antibiotics, was kept under observation, and was later discharged in good condition.

Discussion

A peritonsillar abscess is the accumulation of pus between the palatine tonsillar capsule and the pharyngeal constrictor muscles. One of the hypotheses for the pathogenesis of peritonsillar abscesses is the spread of bacteria from acute tonsillitis cases into the peritonsillar space [6]. The causative organism can be *Streptococcus pyogenes*, *Viridians, Haemophilus influenzae, Fusobacterium,* or *Bacteroides* [3]. Moreover, changes in the oral cavity due to smoking and poor oral hygiene among immunocompromised patients can also be considered risk factors for peritonsillar abscesses [1].

Bilateral peritonsillar abscesses can be clinically challenging to diagnose because of other possible differential diagnosis, such as lymphoma, infectious mononucleosis, severe acute bacterial tonsillitis, or tumors of the salivary gland [2,3]. Therefore, the utilization of CT can help in reaching a diagnosis, as in our case. Nevertheless, airway obstruction in patients with peritonsillar abscesses can be serious, which may delay or prevent the use of CT scans, as reported by Arunathan and Tan [7].

Needle aspiration is considered the primary treatment option for peritonsillar abscesses because of its diagnostic and therapeutic values [2]. Incision and drainage are the other options for management that must be considered. Although there is controversy regarding the definitive management, both treatments are reported to be equally effective in the management of peritonsillar abscesses as per most researchers [8]. Younger age, few episodes of acute tonsillitis, and smaller abscesses were reported to be crucial predictors of good responses to nonsurgical management [9].

Finally, the complications of bilateral peritonsillar abscesses are quite serious and life-threatening, as they may commonly result in airway obstruction if appropriate treatment is delayed. In addition, necrotizing fasciitis, retropharyngeal abscess, mediastinitis, internal carotid artery lesions, and brain abscesses may result from the spread of the infection. The complications are less common in unilateral peritonsillar abscesses due to the less space involved as compared to bilateral abscesses [6,10].

Conclusion

Even though peritonsillar abscesses are not one of the most common complications in children, especially in this age group, it is crucial to keep the differential in mind, as it can occur at any age alongside changes in vaccination.

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Conflict of interest
The authors declare that there is no conflict of interest regarding the publication of this study.

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Consent to participate
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Consent for publication
Not applicable.

Ethics approval
Ethical approval is not required at our institution to publish an anonymous case report.

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