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Case Report

Peritonsillar Abscess in a 40-Day-Old Infant

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A peritonsillar abscess is one of the most commonly occurring deep space infections of the head and neck in adults and children. A peritonsillar abscess that appears in newborns, however, is extremely rare. The treatment of a peritonsillar abscess requires both the selection of appropriate antibiotics and the best procedure to remove the abscessed material. We report a case of a peritonsillar abscess in a 40-day-old infant who was treated with antibiotic therapy alone.

Key Words: Peritonsillar abscess, infant, tonsillectomy

INTRODUCTION

The most commonly occurring deep infection of the head and neck in adults and children is a peritonsillar abscess (PTA).[1] A PTA occurring in newborns, however, is extremely rare. An immediate tonsillectomy or incision and drainage with or without a follow-up tonsillectomy (interval tonsillectomy) and appropriate antibiotic therapy are the traditionally accepted treatments.[2] The optimal treatment of a peritonsillar abscess, however, remains controversial. In this paper, we present a case of a peritonsillar abscess in a 40-day-old infant who was treated with antibiotic therapy alone.

CASE REPORT

The patient, a 40-day-old boy born at term by normal delivery, had been healthy until the onset of symptoms just prior to admittance. He was admitted to the Pediatric Department of Yongdong Severance hospital after a 2-week history of cough, rhinorrhea, poor appetite, and deterioration of his general health condition. On arrival, the patient's temperature was 36.5℃ (97.7° F), respirations were 32 breaths/min, pulse was 130 beats/min, and blood pressure was 90/50 mmHg (50-75th percentile for his age). On physical examination, he appeared to be moderately ill. There was a moderate degree of inspiratory stridor but normal oxygen saturation was noted. Inspection of the oral cavity showed a huge, left peritonsillar swelling.

Laboratory tests revealed a white blood cell count of 11,950 (42% neutrophils, 42% lymphocytes, 10% monocytes, and 4% eosinophils) and normal electrolytes. The C-reactive protein (CRP) level was elevated, at 9.2 mg/L.

On the day of admission, an urgent contrast-enhanced computed tomography (CT) scan of the neck was performed showing a large PTA on the left side that measured 2.7×2.4×1.7 cm (Fig. 1). Treatment with intravenous ampicillin/sulbactam and gentamicin was initiated. On Day 3 of hospitalization, the patient was eating normally, and there was no inspiratory stridor on physical examination. A follow-up CT scan of the neck was performed after five days of intravenous antibiotic therapy. The previously-noted left peritonsillar lower attenuation density with peripheral rim enhancement had markedly decreased (Fig. 2).

On Day 6 of hospitalization, the patient's general condition had normalized and he was discharged with a prescription for oral cefnidir for

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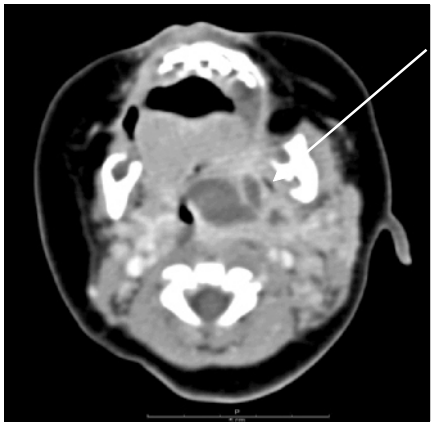

Fig. 1. Cervical axial CT scan shows a low attenuation density with peripheral rim enhancement on the left peritonsillar area.

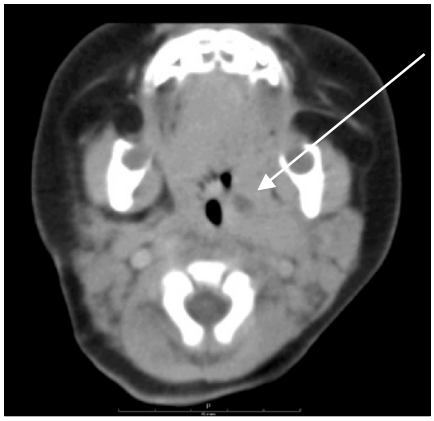

Fig. 2. Follow-up CT scan of the neck after five days of intravenous antibiotic therapy shows a markedly decreased and improved state of the left peritonsillar abscess.

12 days. A follow-up intraoral examination two weeks later showed a well-resolved infection, normal mucosa, and no recurrence of the abscess.

DISCUSSION

A PTA is one of the most commonly occurring infections of the head and neck in adults and children.[1] A PTA in newborns, however, is extremely rare. Conversely, Akhtar and Shinefeld[3] reported an 11-week-old child with a PTA treated with needle aspiration and Kjell Brondbo et al.[4] reported on a 2 1/2-month-old infant with PTA treated with tonsillectomy.

The reported incidence of a PTA varies in the current literature, but recent reviews suggest that it affects approximately 30 persons in every population of 100,000 and 45,000 new cases are reported every year.[5] Streptococcus pyogenes (group A beta-hemolytic streptococcus) is the most important aerobic organism associated with a PTA and peritonsillitis.[6] The most common anaerobic organism is Fusobacterium. A mixed profile of both aerobic and anaerobic organisms cause most abscess infections.[7]

The most common complaints from patients presenting with a PTA are an extremely sore throat or neck pain, odynophagia or dysphagia, a fever greater than 38℃, and an absence of or decrease in oral intake or dehydration.[1] Physical examination reveals neck adenopathy in 94% of patients, uvular deviation in 52% of patients, muffled voice in 37% of patients and trismus in 30% of patients.[1]

A thorough history and physical examination of the patient can often lead to the diagnosis of a PTA, however, radiologic tests may help differentiate a PTA from another diagnosis. Ultrasonography is the easiest and most useful tool to aid in this method of diagnosis. The ultrasound can be obtained transcutaneously by placing the transducer over the submandibular gland and scanning the entire tonsillar area.[7] A CT scan may also be helpful in estimating the size and extension of an abscess in the area. The CT scan should be obtained with contrast to allow for optimal viewing of the abscess. An area of low attenuation on a contrast-enhanced CT scan is suggestive of abscess formation.[7]

The treatment of a PTA requires both the selection of appropriate antibiotics and the best procedure to remove the abscessed material. The choice of antibiotics is highly dependent on both the gram stain and culture of the fluid obtained from the needle aspiration. Previously, penicillin was the antibiotic of choice for the treatment of a PTA, but in recent years the emergence of beta-lactamase-producing organisms has required a change in antibiotic choice.[8]

Three main surgical procedures are available to treat a peritonsillar abscess: needle aspiration, incision and drainage, and immediate tonsillectomy. An abscess tonsillectomy is the treatment of choice in Europe and the U.S., whereas an im-

mediate tonsillectomy is a contraindicated treatment for PTA in Japan.[2] Instead, surgical incision and drainage without a tonsillectomy, in combination with an appropriate antibiotic therapy, is the widely accepted treatment in Japan.[9] A retrospective study of 160 patients with PTA compared needle aspiration alone to incision and drainage. In this study, the authors concluded that needle aspiration alone is an appropriate treatment regimen. However, with this method, there is a higher rate of recurrence, which could ultimately require incision and drainage.[10] Thus, the proper treatment of PTA remains controversial. We report a case of a peritonsillar abscess in a 40-day-old infant who was treated with antibiotic therapy alone. The abcess resolved after therapy and there was no recurrence at follow-up.

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