



CASE REPORTS

DIFFICULTY IN THE DIAGNOSIS AND MANAGEMENT OF PARAPHARYNGEAL ABSCESS: FOREIGN BODY?

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SUMMARY

Parapharyngeal abscess may cause significant mortality and morbidity due to difficulty in diagnosis and management. Early diagnosis is necessary to prevent the development of complications. We report a parapharyngeal abscess in an 8-year-old female patient. She was referred to our clinic after antibiotic treatment for 7 days, with the diagnosis of parapharyngeal abscess secondary to dental infection. Contrast enhanced CT scan of the neck revealed an air-filled area, and oedematous soft tissue around it, in the left parapharyngeal space. Surgical exploration of left parapharyngeal space through an oral approach has revealed a wooden-foreign body. She had an uneventful postoperative period. Although the radiological investigation does not demonstrate any foreign body and there is no visible injury site, unpainted and non-opaque foreign body injury must be suspected.

Keywords: abscess, foreign body, parapharyngeal abscess, periodontal abscess

PARAFARİNGEAL APSE TEŞHİS VE TEDAVİSİNDEKİ GÜÇLÜK: YABANCI CİSİM?

ÖZET

Parafaringeal apseler, teşhis ve tedavilerindeki güçlükler nedeniyle, önemli morbidite ve mortalite nedeni olabilmektedir. Erken teşhis komplikasyonların gelişimini önlemek için gereklidir. Bu makalede 8 yaşında parafaringeal apseli bir olgu sunuldu. Hasta dental enfeksiyona bağlı parafaringeal apse teşhisi ile başka bir merkezde 7 gün süre ile antibiyotik uygulandıktan sonra kliniğimize sevk edilmişti. Kontrastlı boyun tomografisinde sol parafaringeal bölgede içi hava dolu ve etrafı ödemli dokularla sarılı bir alan görüldü. Ağız içinden yapılan müdahale ile apse drenajı yapıldığında içerisinden bir odun parçası çıkartıldı. Postoperatif hiç bir komplikasyon olmadı. Radyolojik olarak görülebilir bir yabancı cisim olmasa da medikal tedaviye rağmen progresyon gösteren çocuk olgularda non-opak yabancı cisim yaralanması düşünülmelidir.

Anahtar Kelimeler: apse, yabancı cisim, parafaringeal apse, peritonsiller apse

INTRODUCTION

The parapharyngeal space is an anatomically complex area containing a variety of important structures, and it lies adjacent to the naso- and oropharynx between the skull base and hyoid bone. Parapharyngeal abscess formation is mostly secondary to an infection of nearby anatomical structures such as; dental, submandibular and parotid glands, pharynx, adenotonsillar tissue, middle and external auditory structures. A parapharyngeal abscess in association with a foreign body is rare¹⁻³.

CASE REPORT

An 8-year-old female patient admitted to another hospital with the complaints of trismus and left-sided painful swelling just beneath the left mandibular angle, was referred to our clinic with the possible diagnosis of left parapharyngeal abscess due to dental origin.

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Intravenous antibiotic (Ceftriaxone 500 mg X 2 per day) regimen had been given to patient for 7 days in the previously admitted hospital.

Clinical history of the patient was devoid of any underlying pathology related to the parapharyngeal abscess. Routine ear nose throat and head neck examination revealed that, there was a bloody discharge through left retromolar region during vigorous palpation of the neck mass. An oral penetrating injury was insistently asked for in the clinical history, but no such event was reported neither by the patient nor the family.

Plain x-ray radiographic evaluation in the anterior and lateral position of the neck demonstrated no pathological findings. An ultrasound scan showed oedema of soft tissue in the neck postero-inferior to left mandibular angle. Contrast enhanced CT scan of the neck revealed an air-filled area, and oedematous soft tissue around it, in the left parapharyngeal space (Fig. 1). Laboratory evaluation revealed nothing except leucocytosis (WBC; 11300/mm³, 90% PNL).

The patient underwent an exploration of left parapharyngeal space through an oral approach in order to drain the suspicious collection of infectious



material from left parapharyngeal space. Under general anaesthesia, following the placement of self-retaining oral retractor, 10 mm incision was created on the area of discharge through left retromolar region. A wooden-foreign body (5 x 30 mm) was encountered beneath the incision (Fig. 2). Wound drainage was completed, and simple sutures of coated vicryl were placed to close the defect. Aerobic, anaerobic and mycobacterial cultures of aspirated material showed no growth. Ampicillin/sulbactam (4 x 1 gr./day) was given intravenously for 5 days. Following an unremarkable postoperative period, the patient was discharged 3 days later the operation.

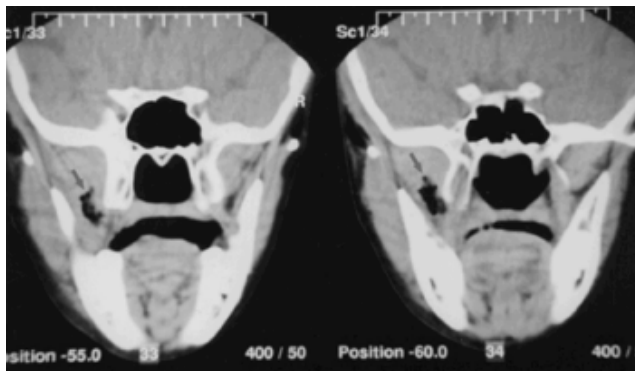


Figure 1: Contrast enhanced CT scan of the neck; an air-filled area and oedematous soft tissue in the left parapharyngeal space.



Figure 2: A wooden-foreign body (5 x 30 mm) removed from left parapharyngeal space.

DISCUSSION

The parapharyngeal space is an inverted pyramid whose base is the inferior surface of the petrous bone with its apex at the lesser horn of the hyoid bone. The parapharyngeal space has within it the internal carotid artery, internal jugular vein, the vagal, glossopharyngeal and hypoglossal nerves, the sympathetic chain and numerous lymph nodes including the node of Rouviere. This space communicates with the submandibular space inferomedially, the masticator and parotid spaces laterally and the peritonsillar space medially. Some cystic (branchial, hydatid) tumoral and infectious pathologies may be encountered in parapharyngeal

space^{4,5}. The infection is the most frequently observed pathology⁶. Odontogenic infection is the most common source of parapharyngeal infections in adults¹⁻³.

If the wooden foreign body is unpainted with lead paint, it could not be demonstrated radiographically. CT is a useful diagnostic tool for parapharyngeal abscess. However, CT scanning is unreliable in detecting foreign body especially in cases of unpainted wooden particles³. This also proved to be the case in our report. Lateral oropharyngeal injuries require increased concern about potential neurovascular impairment and even death. However, neither the mechanism of injury nor the degree of injury correlates with the potential for neurovascular sequelae^{7,8}. In our case there was no complication, and findings other than painful swelling of the neck and trismus.

Initial care of patients with a parapharyngeal abscess includes broad spectrum intravenous antibiotics to cover for both aerobic and anaerobic organisms. Other treatment modalities for parapharyngeal abscess include needle aspiration and drainage. Open surgical drainage is mandatory in the cases with abscess (gas-forming or not) formation and foreign body suspicion. External drainage is better reserved for those with abscesses lateral to the great vessels. Transoral approach to parapharyngeal space can be advantageous and may be used safely in selected cases^{3,9}. In spite of the negative medical history of trauma, we made a surgical intervention by intraoral route with the suspicion of foreign body. Parapharyngeal infection resistant to medical treatment for 7 days was an important factor made us to think the possibilities of foreign body.

In conclusion, surgical intervention must not be avoided when a child with a deep neck infection resistant to medical treatment was admitted without any history of foreign body injury. Although the radiological investigation does not demonstrate any foreign body and there is no visible injury site, unpainted and non-opaque foreign body injury must be suspected.

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