KBB ve BBC Dergisi 24 (1):10-12, 2016

A Rare Reason of Retropharyngeal Abscess: Tularemia

Retrofaringeal Apsenin Nadir Bir Nedeni: Tularemi

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ABSTRACT

Tularemia is a zoonotic disease, and its 6 clinical forms have been described namely pneumonic, ulceroglandular, typhoidal, glandular, oculoglandular and oropharyngeal. The most common form in the world is ulceroglanduler form. A fifty-two-year old, housewife, female patient was referred to our clinic with the diagnosis of retropharyngeal mass. There was a fluctuating and hyperemic 3x3 cm mass in the posterior pharyngeal region. She developed respiratory distress despite IV antibiotic treatment. Computerized tomography showed a retropharyngeal abscess, and the abscess was drained under general anesthesia. Further analysis was performed, and Francisella tularensis microagglutination test was positive. Retropharyngeal abscess is a rare clinical entity, and it is generally seen in childhood. Francisella tularensis is an extremely rare cause of retropharyngeal abscess. Francisella tularensis must be considered In a retropharyngeal abscess in which a pathogenic agent can not be determined.

Keywords

Tularemia; retropharyngeal abscess; zoonotic infection

ÖZET

Tularemi zoonotik bir hastalıktır ve 6 tipi vardır bunlar; pnömonik, ülseroglandüler, tifoidal, glandüler, okuloglandüler ve orofaringealdir. Dünyada en sık görülen form ülseroglandülerdir. Elli iki yaşında, ev hanımı, bayan hasta kliniğimize retrofaringeal kitle nedeniyle refere edildi. Posterior faringeal bölgede 3*3 cm fluktuan ve hiperemik lezyon izlendi. IV antibiyotik tedavisine rağmen havayolu obstrüksiyon semptomları başlayan hastanın bilgisayarlı tomografisinde retrofaringeal apse tesbit edildi ve apse genel anestezi altında drene edildi. Yapılan incelemelerde fransisella tularemi mikroaglütinasyon testi pozitif olarak raporlandı. Retrofaringeal apse nadir bir klinik durumdur ve genellikle çocukluk çağında görülür. Tularemi ise çok nadiren sebebidir. Patojen tesbit edilemeyen durumlarda ayırıcı tanıda mutlaka akla gelmelidir.

Anahtar Sözcükler

Tularemi; retrofaringeal apse; zoonotik enfeksiyon

Çalışmanın Dergiye Ulaştığı Tarih: **03.01.2016** Çalışmanın Basıma Kabul Edildiği Tarih: **20.03.2016**

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INTRODUCTION

Retropharyngeal space is located between the medium and deep layers of the deep cervical fascia. This potential space extends to mediastinum and infections may spread to mediastinum or chest by this way. The most common cause of retropharyngeal space infections is infected regional lymph nodes.[1]

The reason of childhood abscess is generally upper respiratory tract infections. During adulthood the reasons are immunosuppression, infection, trauma, vertebral fracture, oro-endotracheal intubations, and endoscopic procedures. The most common complaints on admission are restricted cervical mobility and odynophagia. Respiratory distress and stridor mostly follows these complaints. Retropharyngeal abscess is rare and often seen in the pediatric age group.[1,2]

Tularemia is a bacterial zoonotic disease caused by Francisella tularensis. These cocobacillus bacteria are gram-negative and endemicly seen in Northern hemisphere.[3] In recent years the disease has started to be seen in non-endemic areas. Francisella tularensis can be transmitted to humans by direct contact with infected rodents, rabbits and hares or with consumption of polluted water and food. The bite of an infected vector such as arthropods and mosquitoes can be the reason of the disease.[4,5]

There are six clinical forms which are pneumonic, ulceroglandular, typhoidal, glandular, oculoglandular and oropharyngeal. The most common form in the world is ulceroglanduler but oropharyngeal type is more frequent in Turkey because of the uncontrolled consumption of polluted water and insufficient cooking of contaminated food.[6,7] The symptoms of oropharyngeal tularemia are severe pharyngitis, fever and cervical abscess formation which are non-specific and this can be the reason for late diagnosis. Bacteria are resistant to beta lactam antibiotics so in beta lactam resistant severe pharyngitis this disease should be considered.

In this paper we described a retropharyngeal abscess caused by tularemia disease. This case is the second case in the literature.[8]

CASE REPORT

52 years old female patient had complaint sore throat and progressive difficulty in swallowing fort he last 2 days. In her history, she had fever and sore throat 2 weeks ago and she was treated with amoxicillin. All symptoms improved except difficulty in swallowing. On her oropharynx examination (4 mm rigid 0^0 endoscope Hopkins KARL STORZ GmbH& Co. Tuttlingen Germany) there was a 3*3 cm fluctuating and hyperemic mass in the posterior pharyngeal region (Figure 1). Other physical examination was normal. CT examination showed multiloculated retropharingeal mass (Figure 2) which was interpreted as an diagnosed abscess. Streptococci are the most commonly isolated bacteria from the retropharyngeal abscesses hence patient was administered began intravascular sulbactam ampicillin treatment and anesthesia preparation was initiated. During first day of antibiotherapy the patient had respiratory distress; the abscess was drained urgently under general anesthesia. The microbiological examination and the culture of the material was unspecific. The pathological examination was compatible with inflammation. Further analysis was performed and Francisella tularensis microagglutination test was 1/160. Streptomycin and doxycycline theraphy was administered and the patient was completely cured. After the diagnosis in patient's history found drinking spring water about 2 weeks ago.

DISCUSSION

Retropharyngeal abscess threatens the upper respiratory system so management is very important. Sometimes intensive care, antibiotics and surgery are necessary to reduce the mortality. Surgical drainage has a high cure rate for management of the retropharyngeal abscess greater than 2 cm in diameter.[1] In our case the diameter of abscess was 3 cm.

Figure 1. Endoscopic view.

Figure 2. CT scan.

Retropharyngeal abscess is rare in adults and clinical suspicion can be supported by radiological methods. CT and MRI are the most preferred methods for diagnosis. Spread of infection and also the measurements of the abscess can be determined by these methods. Both CT and MRI have high sensitivity. CT is cheaper and has shorter examination time compared to MRI, so we preferred CT scan.[9]

Streptococci are the most commonly isolated bacteria from the retropharyngeal abscess. Other species are also the cause of retropharyngeal abscess but Francisella tularensis is extreamly rare. Tularemia is an endemic disease in Turkey but recently we are confronted with increasing outbreaks.[3,6,10] Contrary to its incidence world, oropharyngeal tularemia is the most common type in Turkey.[6,7] The infection usually starts with fever and sore throat and usually presents with neck masses so it can misdiagnosed as streptococcus infections, infectious mononucleosis, diphtheria, cat scratch disease, tuberculosis, lyme disease, rickettsial and fungal infections and malignant diseases such as lymphoma and leukemia. Francisella tularensis is a beta-lactam resistant bacterium.[11] so wrong diagnosis and choosing wrong of antibiotics may cause complications. In this case, tularemia was diagnosed nearly one month after the onset of the symptoms.

Tularemia especially glanduler and oropharingeal types can represent with neck abscess and persisting neck abscess should be drained for complete and rapid recovery.[12] In this case the retropharyngeal abscess was drained in order to prevent mortality. After drainage and medical treatment, the symptoms were completely improved.

Tularemia can be treated by antibiotics such as streptomycin, doxycycline or ciprofloxacin. In recent studies quinolones were found to be statistically equivalent to streptomycin and superior to doxycycline.[13] There are no case controlled clinical treatment studies about tularemia treatment and the treatment mostly depends on experience.[7] Tetracyclines are generally administered for 14-21 days orally and streptomycin for 7-10 days intramuscularly. Quinolones treatment is 14 days orally. In our case we preferred combination treatment of tetracyclines and streptomycin because of late diagnosis and the importance and danger the abscess location posessed.

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