

Severe Stridor Can Be the Only Presenting Symptom of Retropharyngeal Abscess: Case Report

Ciddi Stridor Retrofarengeal Apsenin Tek Bulgusu Olabilir

Arzu BABAYİĞİT, MD,^a
Duygu ÖLMEZ, MD,^a
Yasemin TOPÇU, MD,^a
Nevin UZUNER, MD,^a
Fatih FIRINCI, MD,^a
Taner Kemal ERDAĞ, MD,^b
Özkan KARAMAN, MD^a

^aÇocuk Sağlığı ve Hastalıkları AD,

^bKulak Burun Boğaz AD,
Dokuz Eylül Üniversitesi Tıp Fakültesi,
İzmir

Geliş Tarihi/Received: 02.05.2008
Kabul Tarihi/Accepted: 25.08.2008

Yazışma Adresi/Correspondence:
Arzu BABAYİĞİT, MD
Dokuz Eylül Üniversitesi Tıp Fakültesi,
Çocuk Sağlığı ve Hastalıkları AD, İzmir,
TÜRKİYE/TURKEY
arabayigit@yahoo.com

ABSTRACT Retropharyngeal abscesses can be a life-threatening emergency, with potential for airway obstruction. Common presenting signs of a retropharyngeal abscess include: fever, inspiratory stridor, bulging of the pharyngeal wall, limited movement and palpable swelling of the neck. Current treatment consists of oral incision and drainage of the abscess followed by the administration of antibiotics parenterally. Here, a previously healthy infant admitted with severe stridor who had rapidly progressive respiratory insufficiency and diagnosed as retropharyngeal abscess was reported. We emphasize that retropharyngeal abscess should be considered in differential diagnosis and excluded as soon as possible even if an infant admits only with severe acute stridor.

Key Words: Retropharyngeal abscess; dyspnea; infant

ÖZET Retrofarengeal abse, hava yolunda obstrüksiyona yol açabilme potansiyeli nedeni ile hayatı tehdit eden bir acil olabilmektedir. Retrofarengeal absede sık başvuru bulguları olarak ateş, inspiratuar stridor, farengeal duvarda şişlik, boyunda hareket kısıtlılığı ve boyunda ele gelen kitle görülebilmektedir. Günümüzdeki tedavisi parenteral antibiyotik başlanmasını takiben oral insizyon ve absenin drene edilmesini kapsamaktadır. Burada, daha önce tamamen sağlıklı olan, hızlı progresif solunum yetmezliği gelişen, ciddi stridor ile başvurup retrofarengeal abse tanısı alan bir süt çocuğu sunulmuştur. Sadece ciddi akut stridor ile başvuran bir infantta bile retrofarengeal absenin ayırıcı tanıda düşünülmesi ve en kısa süre içinde dışlanması gerektiğini vurgulamak amacıyla bu çalışma sunulmuştur.

Anahtar Kelimeler: Retrofarengeal abse; dispne; süt çocuğu

Türkiye Klinikleri J Pediatr 2009;18(4):339-41

A deep tissue neck infection, retropharyngeal abscess is serious and occasionally life-threatening partly as a result of the anatomic location and the potential to obstruct the upper airway. It occurs most commonly in children younger than five years of age.¹ Retropharyngeal abscesses are mostly occur as a consequence of infections of the nasopharynx, paranasal sinuses, or middle ear. The infectious foci extend to lymph nodes located in the space between the posterior pharyngeal wall and the prevertebral fascia. These lymph nodes likely atrophy after the first three or four years of life.²⁻⁴ Retropharyngeal infections are most often polymicrobial; the usual pathogens include group A streptococcus, oropharyngeal anaerobic bacteria, and *Staphylococcus aureus*.^{3,4} Stridor and respiratory distress are not common findings.^{5,6} We report a case of retro-

haryngeal abscess in a previously healthy infant presenting with acute severe stridor.

CASE REPORT

A three months old boy admitted with severe inspiratory stridor and respiratory distress. Nasal obstruction and noisy breathing was present for three days. The noise increased and sucking in of the chest was noticed two days before admission. The condition then further deteriorated, and referred to another hospital and observed under the suspicion of viral laryngotracheitis for one day. Then, a rapidly progressive respiratory insufficiency developed and he was sent to our hospital. He was tachypneic (respiratory rate of 80/min), tachycardic (heart rate was 190/minute) and stridorous. He had no fever. The patient's oropharynx was unremarkable. Pulse oximetry measured oxygen saturation as 80%. Laboratory investigations revealed white cell count $13.100/\text{mm}^3$ (neutrophils 62%) and C-reactive protein: 34.6 mg/L. The chest radiograph was normal. Computerized tomography scan of the neck revealed a 4 x 4 cm retropharyngeal abscess which extended into the right sternocleidomastoid muscle and obstructed the airway completely (Figure 1). The abscess was drained transorally and 30 mL yellow pus was aspirated. Antibiotics, including ceftriaxone and metronidazole, were started after blood cultures had been ta-

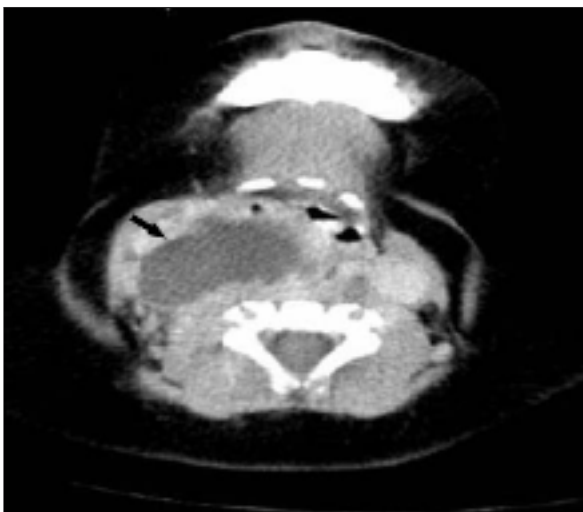


FIGURE 1: Computerized tomography of patient revealed a giant abscess compressing the airway totally (pointed with arrow).

ken. *S. aureus*, grew in the abscess culture. After the surgical drainage, the stridor regressed dramatically. The boy continued 21 days course of antibiotics and discharged without any complaints. The last neck ultrasonography on the third week of antibiotherapy revealed no abscess.

DISCUSSION

Retropharyngeal abscess has become less frequent than in the past because of the widespread use of antibiotics. The retropharyngeal space is posterior to the pharynx, bound by the buccopharyngeal fascia anteriorly, the prevertebral fascia posteriorly, and the carotid sheaths laterally. It extends superiorly to the base of the skull and inferiorly to the mediastinum. Retropharyngeal abscess is thought to develop secondary to lymphatic drainage or contiguous spread of upper respiratory tract infections.⁷ In our case, upper respiratory infection which began three days before admission was probably extended the lymph nodes located in the space between the posterior pharyngeal wall and the prevertebral fascia.

The typical presentation of a retropharyngeal abscess is often nonspecific. Considerable clinical overlap with several other conditions, such as croup, epiglottitis, tracheitis, and peritonsillar abscess, is frequently observed. Presenting symptoms are usually vague, with most patients showing evidence of a viral upper respiratory infection for several days prior to worsening of the clinical picture. Decreased oral intake, neck pain, torticollis, odynophagia, neck swelling, pyrexia, dysphagia, anorexia, drooling and trismus are common reported symptoms at presentation.⁵ Airway symptoms including severe stridor and dyspnea were unusual findings but their occurrence emphasizes the potential morbidity from these infections.⁶ It is known that stridor is a sign of severe airway compromise. Craig et al reported characteristics of 64 patients with retropharyngeal abscess and they found neck pain, fever, sore throat and neck mass as the common chief complaints. Only 5% of patients in their series had respiratory distress or stridor.¹ The presented case was admitted with severe stridor and dyspnea. The case reported here was un-

common because of the absence of all other symptoms of disease except airway obstruction and stridor.

The dangers of a retropharyngeal abscess are airway obstruction and spread of infection to involve the carotid sheath and the mediastinum. The airway, if compromised, should be secured before other diagnostic procedures. Treatment options include intravenous antibiotics with or without surgical drainage. Parenteral antibiotics covering both aerobic and anaerobic flora of the upper aerodigestive tract should be prescribed.⁸ A 3rd-generation cephalosporin combined with ampicilline-sulbactam or clindamycin to provide anaerobic coverage is effective. We used antibiotics, including ceftriaxone and metronidazole, combined with surgical

drainage for the treatment of patient. A computerized tomography is also useful in delineating the extent of the disease, which helps in planning surgical approaches.^{9,10} In our patient, the diagnosis of retropharyngeal abscess was also confirmed with CT. As the abscess completely obstructed the airway, it was drained after the diagnosis was established. After the drainage, ceftriaxone and metronidazole treatments continued for three weeks. The abscess resolved completely with surgical drainage and antibiotic therapy treatment.

Deep neck infections are still potentially fatal, but the morbidity and mortality can be reduced. Retropharyngeal abscess should be considered in the differential diagnosis of acute severe stridor especially in infants under six months.

REFERENCES

1. Craig FW, Schunk JE. Retropharyngeal abscess in children: clinical presentation, utility of imaging, and current management. *Pediatrics* 2003;111(6 Pt 1):1394-8.
2. Belet N, İnce E. [Deep neck infections in children peritonsillar, retropharyngeal and lateral pharyngeal abscesses]. *Turkiye Klinikleri J Pediatr Sci* 2007;3(2):52-8.
3. Davutoğlu M, Gözü A, Gürkan F. [Report of Two Cases Diagnosed As Retropharyngeal Abscess]. *Inonu Univ Tıp Fak Derg* 2006; 13(1):59-62.
4. Köybaşıoğlu A. [Deep neck infections]. *Turkiye Klinikleri J Surg Med Sci* 2006;2(28):14-27.
5. Philpott CM, Selvadurai D, Banerjee AR. Paediatric retropharyngeal abscess. *J Laryngol Otol* 2004;118(12):919-26.
6. Daya H, Lo S, Papsin BC, Zachariasova A, Murray H, Pirie J, et al. Retropharyngeal and parapharyngeal infections in children: the Toronto experience. *Int J Pediatr Otorhinolaryngol* 2005;69(1):81-6.
7. Asmar BI. Bacteriology of retropharyngeal abscess in children. *Pediatr Infect Dis J* 1990;9(8):595-7.
8. Gidley PW, Ghorayeb BY, Stienberg CM. Contemporary management of deep neck space infections. *Otolaryngol Head Neck Surg* 1997;116(1):16-22.
9. Lee SS, Schwartz RH, Bahadori RS. Retropharyngeal abscess: epiglottitis of the new millennium. *J Pediatr* 2001;138(3):435-7.
10. Kirse DJ, Roberson DW. Surgical management of retropharyngeal space infections in children. *Laryngoscope* 2001;111(8):1413-22.