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Case Report

Retropharyngeal abscess rare presentation in a 11 months old infant: a case report

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ABSTRACT

Retropharyngeal abscess (RPA) is a rare deep neck infection that usually affects young children. It is the most common deep neck infection in children. We would like to present this case because of unusual presentation at this age.

Keywords: Retropharyngeal abscess, Dyspnea, Dysphagia, Stridor, Infants

INTRODUCTION

Retropharyngeal abscesses generally result from upper aerodigestive infection or trauma, such as accidental swallowing of a foreign body or traumatic orotracheal intubation. Such abscesses occur mostly in children up to age 5 years. Initial symptoms are non-specific, such as irritability, loss of appetite and fever; as the condition progresses, there may be dysphagia, odynophagia, drooling, a "hot potato" (garbled) voice or a muffled cry.[1] The severity of symptoms is directly related with the volume of the abscess; there may be severe respiratory distress.[2]

The presentation may be dramatic, because as the abscess forms in the retropharyngeal space it grows towards the soft palate, base of tongue, posterior pharyngeal wall and larynx, which narrows considerably the airway lumen. This may lead to respiratory failure, especially in nursing babies.[3]

Upon confirmation of the diagnosis of a retropharyngeal abscess, the child should immediately be admitted to hospital for continuous monitoring of vital signs, therapy with endovenous antibiotics, and surgical drainage.

Spontaneous rupture of the abscess may lead to massive aspiration of pus and the development of pulmonary empyema, mediastinitis and septicemia. Orotracheal intubation or a tracheotomy is required to assure airway patency.[4]

CASE REPORT

11 months old girl referred from another hospital with 7 days history of admission. Patient complain started 2 days prior of admission with fever, dysphagia, odynophagia, noisy breathing. She was admitted there as a case of laryngotracheobronchitis and received intravenous antibiotics, nebulization, physiotherapy but with no improvement. Patient had an attack of desaturation and was intubated and admitted to the PICU there. On examination there was inspiratory stridor with suprasternal and subcostal retractions with interrupted inspiration mostly transmitted sounds. ENT was consulted and showed laryngomalascia with normal supraglottic, glottic and subglottic area, mobile bilateral vocal cord movements. But complained that the baby refused feeding with excessive secretions bronchoscopy advised to exclude Trachea Oesophageal Fistula for with she was transferred to higher centre.

Case was accepted and patient transferred intubated on August 24 2016. Further investigations, including full blood count and tests for urea, electrolytes, and C-reactive protein, were all within the normal ranges beside elevation of WBC count was 20.2 (10^3/µL)

Bronchoscopy was done and showed picture of laryngomalsaia and reflux. During the procedure huge left retropharyngeal bulge was witnessed in the operating room.

Computed tomography of the neck revealed a hypodence cystic lesion with a differential diagnosis of retropharyngeal abscess as shown in Figure 1. History was taken again from the mother and she gave history of oropharyngeal trauma by a straw introduced by her elder 3 years old sister 4 days prior to her problem started. Second day she was taken to the operating room again and surgical drainage was achieved by a transoral approach; there was abundant pus. The child progressed favorably and was extubated on the second day after surgery. Repeated blood cell count WBC dropped to within normal levels.

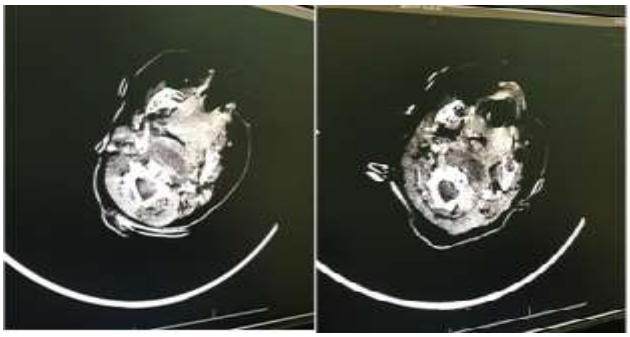

Figure 1: CT scan showing hypodense retropharyngeal collection.

DISCUSSION

Retropharyngeal abscess (RPA) is a rare deep neck infection that usually affects young children. It is the most common deep neck infection in children.[5] In children, abscess formation usually follows an upper respiratory tract infection with suppuration of the retropharyngeal lymph nodes. These lymph nodes usually atrophy by 3 to 4 years of age. However, the elderly and newborns can develop retropharyngeal infection.[6]

Knowledge of the retropharyngeal space and its relationship to the other compartments is important in understanding the presentation, treatment, and complications of deep neck infections. The retro-pharyngeal space extends from the base of the skull to the mediastinum at the level of the first or second thoracic vertebrae. It is limited anteriorly by the buccopharyngeal fascia the middle layer of the deep cervical fascia), laterally by the carotid sheath (its neurovascular contents), and posteriorly by the alar fascia of the deep cervical fascia. After the age of 5 years, when the lymph nodes in this potential space have disappeared, retropharyngeal infection becomes less frequent. Adults presenting with this infection often have a history of a foreign body ingestion, external trauma, or instrumentation, such as incubation or esophagoscopy. This should also raise the suspicion of an underlying illness, such as diabetes, immunodeficiency, malignancy, chronic alcoholism, or tuberculosis of the cervical spine.

In young children, clinical presentation of RPA includes (1) feeding problem, (2) fever, (3) upper airway obstruction with stridor. Common organisms grown from these abscesses are Group A *Betahaemolytic streptococcus, Staphylococcus aureus, Haemophilius influenza, Bacteroides, Peptostreptococcus* and *Fusobacterium*.[8]

A great deal of controversy exists regarding the utility of the computed tomographic (CT) scan, especially in young infants. Ring enhancement around an area of low attenuation on CT is not pathognomonic of an abscess. Even free air in the retropharyngeal area, which may be considered a sign of abscess, can be due to anaerobic infection, fistulous connection, or even a necrotic cavity of a neoplasm.[9]

The optimal management of RPA has been the subject of debate for more than a century. Controlling the airway, administering intravenous antibiotics, and surgical drainage have markedly affected the morbidity and mortality. The early diagnosis and widespread use of antibiotics have made these infections less common today. Physicians should be aware of it and act urgently to avoid life-threatening complications. The complications include airway compromise, perforation, mediastinitis, septic shock, and aspiration pneumonia.[10]

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