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Case Report

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Retropharyngeal Abscess following an Unusual Penetrating Foreign Body (Blister pack) – An Airway Emergency

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Abstract

Retropharyngeal abscess can be a deadly condition if not treated at the right time. Etiology could be following penetrating foreign body injury and extension of the prevertebral space infection. Retropharyngeal abscess can cause respiratory distress and mortality due to extension of infection to danger space. In this case we present an elderly male with uncontrolled diabetes who developed retropharyngeal abscess following an accidental intake of a blister pack of oral hypoglycemic drug. Blister pack is an unusual cause of retropharyngeal abscess but can be associated in elderly patient with loss of dexterity and difficulty in vision.

Keywords: Penetrating foreign body, Retropharyngeal abscess, blister pack, Diabetes, Prevertebral space.

INTRODUCTION

Retropharyngeal abscess is the infection between buccopharyngeal fascia and the prevertebral fascia. Superior and inferior boundaries of retropharyngeal space are skull base and posterior mediastinum respectively. It is not a very common condition but can lead to airway compromise rapidly, resulting in fatal complications [1, 2]. It is common in less than five years of age following suppuration of lymph nodes. In adults, it is caused by trauma after ingestion of foreign body that penetrates the retropharyngeal space through pharyngeal wall [3, 4], post tracheal intubation and extension of tooth infections following tooth extraction [2]. Many studies have shown that most of these abscesses are polymicrobial type and include streptococcus, staphylococcus and anaerobes, tuberculosis [5].

Patients may present with fever, sore throat, dysphagia, dysphonia (hot potato voice), drooling, neck stiffness, respiratory distress and sepsis. Neck movements will be associated with severe pain that patient will try to avoid extension of the neck. On inspection, a visible bulge in the posterior pharyngeal wall with congestion can be seen. The lateral neck radiograph is often sufficient to make the diagnosis. Typically an extension of the prevertebral soft tissue more than 7 mm at C2 and 14 mm at C6 in children is diagnostic of retropharyngeal abscess. In adults, the value is more than 7 mm at C2 and 22 at C6. There will be loss of normal cervical spine lordosis and appearance of air or foreign body in the soft tissue plane. Chest X ray is needed to look for mediastinal involvement. CT is useful for diagnosis of early stage infections while it allows differentiation between cellulitis and abscess, and is also useful in defining the vascular structures and their relationship. It also helps in defining what all deep neck spaces are involved. The clinical picture will deteriorate rapidly causing airway compromise. Hence it requires immediate surgical drainage along with suitable antibiotic therapy [6, 7]. The complications are potentially dangerous and include paravertebral posterior extension (osteomyelitis, discitis, epidural abscess) lateral extension involving the carotid and jugular vein, compromising the airway, mediastinitis resulting in systemic dissemination sepsis [8]. Retropharyngeal abscess is more common in patients with immunocompromised status like diabetes [9].

CASE REPORT

63 year old male, known Diabetic and Hypertensive came with complaints of difficulty in swallowing, change in voice, drooling of saliva, difficulty in breathing, neck swelling and history of fever for 3 days.

On physical examination, the patient's vitals were stable. Patient had a noisy breathing. Examination of the oropharynx revealed erythema of the posterior pharyngeal wall with visible bulge. Dentition was grossly normal. There was a diffuse swelling over the neck not crossing the sternocleidomastoid laterally.

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On palpation it was warm, tender and fluctuant. Laryngeal Crepitus not felt. His respiratory rate was on higher side with stridor. Other systemic examinations were under normal limitS.

Neck X ray revealed soft tissue edema in the retropharyngeal space with air shadows. The patient's total Leukocyte count was 14000. CBG at the time of admission was 397mg/dL. Emergency CT scan neck plain done revealed a large retro pharyngeal abscess extending from C2 to T4 vertebral level with air foci and fluid within (figure 1). Suspicious Foreign body was also seen at C6 – C7 level seen just postero inferior to the cricoid- which was suggested by the radiologist to be within the retropharyngeal space entirely or impacted at the level of the cricopharynx- cervical esophagus junction with extension into the pharyngeal space (figure 2). Diffuse pharyngeal and laryngeal edema was also noted.

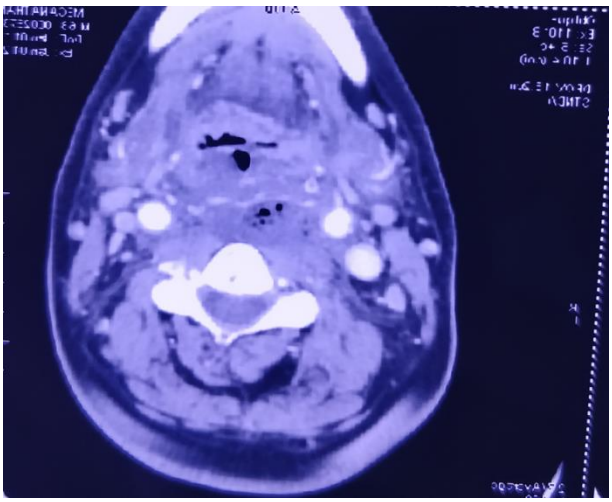

Figure 1: CECT axial section showing abscess cavity in retropharyngeal space with air shadows in it.

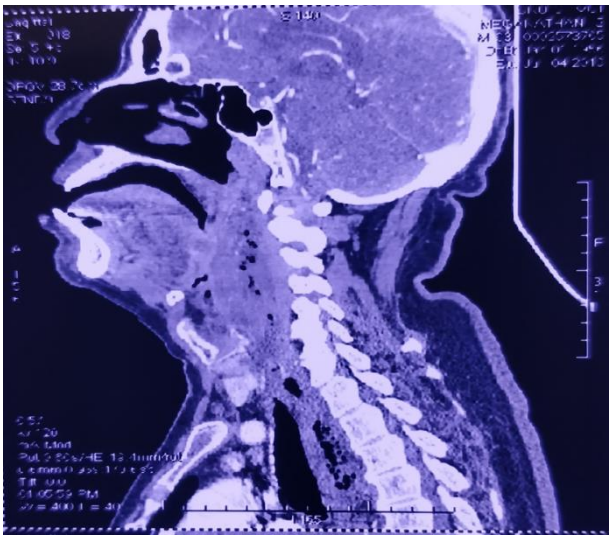

Figure 2: Sagittal section showing extent of Retropharyngeal abscess with suspicious foreign body.

Patient was immediately planned for emergency tracheostomy under local anaesthesia, rigid esophagoscopy and foreign body removal under general anaesthesia and incision and drainage of the retropharyngeal abscess intra-orally. Foreign body which was found to be the intact blister pack identified at the level of the Crico-pharynx removed and multiple stab incisions at the retropharyngeal space were given and around 40 ml pus was drained (figure 3). Pus was sent for culture and sensitivity and the organisms isolated were Enterobacter and Streptococcal species. Patient was treated with broad spectrum antibiotics. Intraoperative and post-operative periods were uneventful.

Post operatively the patient was on ryle's tube feed at 5ml/hour. Patient was put on strict glycemic control with glycemic diet after obtaining an endocrine and a clinical nutrition opinion. Daily tracheostomy tube care was given, and the patient was started on oral feeds after CXR on 4th post-operative day which showed no abnormality. Smaller tracheostomy tube was used and spigotted. The patient was tolerating spigot well subsequent to the tube change. The patient was decannulated on the 11th post-operative day and was maintaining saturation spo2 100% in room air. Strict glycaemic control was advised.

Figure 3: Blister pack causing penetrating injury to pharyngeal wall.

Patient was followed at one month of surgery and was doing well. No history of difficulty in swallowing or respiratory distress. Tracheostomy stoma wound healed.

DISCUSSION

Pharyngeal foreign bodies are quite common. In adults it is common in patients with dental prosthesis, psychotics or patients with mental retardation, alcoholics and old age. The most common pharyngeal foreign body encountered is fish bone or chicken bone fragment [10].

It may generally manifest, initially as pharyngeal discomfort followed by dysphagia, odynophagia and may evolve into having fever, sepsis and difficulty in breathing. Timely done CT scan is of great value in these patients to diagnose the complications. Uncomplicated foreign body can be removed with endoscopic assistance. Complications of pharyngeal foreign body can be retropharyngeal abscess and mediastinitis which could be life threatening. Early diagnosis and surgical drainage of the abscess with foreign body removal is mandatory to save the patient. Acquiring the airway by tracheostomy is the most crucial step in patients with retropharyngeal abscess and airway narrowing, complicated by a penetrating foreign body. Intubation in these patients can be lead to rupture of the abscess which could complicate the clinical scenario with aspiration of pus.

In the above case the pharyngeal foreign body is the tablet with its outer cover which the patient ingested along with his other hypoglycemic medications unknowingly. Initially he had symptoms of dysphagia progressing to difficulty in breathing with neck swelling. Only in CT scan we found a suspicious foreign body at cricopharynx level. Early diagnosis can reduce the risk of mediastinitis and sepsis thus reducing the morbidity and mortality.

KEY POINTS

- Foreign bodies are a common cause in adults leading to retropharyngeal abscess. Most common foreign body is fish bone or chicken bone. Foreign body BLISTER PACK is a rare presentation. In elderly diabetic patient with difficulty in dexterity and vision, blister packs should be used with great caution.
- It could be avoided by proper counseling to the patient and the relatives regarding the usage of daily medications.

- Cutting the single blister pack as in this patient should be avoided.
- Vigilant protocol needed to avoid airway emergency in such cases of retropharyngeal abscess. Timing of CT scan and TRACHEOSTOMY is of great significance in the management.

Conflict of Interest: None.

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