European Journal of Molecular & Clinical Medicine

ISSN 2515-8260 Volume 9, Issue 4, Summer 2022

CAN ACUTE RETROPHARYNGEAL ABSCESS OCCUR IN HEALTHY ADULTS: A CASE SERIES

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ABSTRACT :

Retro pharyngeal abscess is infection followed by collection of pus in retro pharyngeal space. In the adult group they are usually secondary to trauma, foreign bodies, or as a complication of dental infections. Early diagnosis and the wide spread use of antibiotics have made these infections less common today . Non-specific acute retro pharyngeal abscess most commonly occurs in infants and young children. It is rare in adults mostly associated with tuberculosis of the cervical spine. Some cases of acute retro pharyngeal abscesses have been reported in adults following foreign body ingestion and in immunocompromised individuals. The present study attempts to document acute retro pharyngeal abscess in adults following trauma. Majority of patients recovered with conservative management but some required incision and drainage. Diabetes mellitus was the comorbidity in one third of patients. The management of these cases is based on antibiotics and surgical drainage.

Key words :Retro pharyngeal abscess, Trauma, Tuberculosis

ISSN 2515-8260 Volume 9, Issue 4, Summer 2022

INTRODUCTION:

The retro pharyngeal space is the anatomical region that spans from the base of the skull to the mediastinum. It Is located anterior to pre vertebral fascia covering the muscles, and posterior to pharynx and oesophagus. It is bounded anteriorly by bucco pharyngeal fascia, laterally by carotid sheath and posteriorly by prevertebral fascia. The space contains lymph nodes draining the nasopharynx, adenoids, posterior group of para nasal sinuses and middle ear. The internal carotid artery divides them into medial and lateral masses and medial group atrophy by puberty. The lateral nodes of Rouvieré persist and head and neck cancers can metastasise into them. In childhood the medial nodes get infected following upper respiratory tract infection and lead to abcess but their atrophy makes the abcess unlikely in adults.(1) In adults acute retro pharyngeal abscess has been reported in immunocompromised conditions, ingestion of foreign body and overt trauma.(2) Delayed diagnosis and management can cause upper airway obstruction and asphyxiation.

MATERIALS AND METHODS

The study is based on clinical records of government ENT hospital, OMC, koti Hyderabad from 2012 to 2021 of 12 patients.
9 were males in the age group of 21 to 55 and 3 were females in the same age group. 4 of the male patients were diabetic but under control with treatment.

Inclusion Criteria:

1. Patients above the age of 21 years
2. Patients with odynophagia and constitutional symptoms.
3. Patients with swelling over posterior pharyngeal wall on video laryngoscopy.

Exclusion Criteria:

1. Infants children and young adults below the age of 21 years.
2. Immuno compromised individuals.

- Diagnosed inherited or congenital disorders leading to immuno deficiency
- Patients undergoing chemo radio therapy.
- Patients on systemic steroids or cytotoxic drugs for more than 3 months.

3. History of tuberculosis
4. Frank malignancy on aspiration cytology with possible super added infection.

METHODOLOGY

Clinical records of 12 patients confirming the criteria of present study were recorded.
HISTORY : Patients passing fingers deep into the throat and trying to clear mucosa while brushing the teeth early in the morning was the common feature in all the patients.

All the clinical records with patients in designated age group with Symptoms of Odynophagia, drooling of saliva, constitutional symptoms . Signs of fetid odor from oral cavity, coated tongue, presence of overt swelling over posterior pharyngeal wall. And aspiration may or may not reveal purulent material.

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Investigations as fine needle aspiration cytology during video laryngoscopy for cytology and culture and sensitivity if purulent matter could be withdrawn.

figure-1:V**ideo laryngoscopy showing retro pharyngeal abscess**

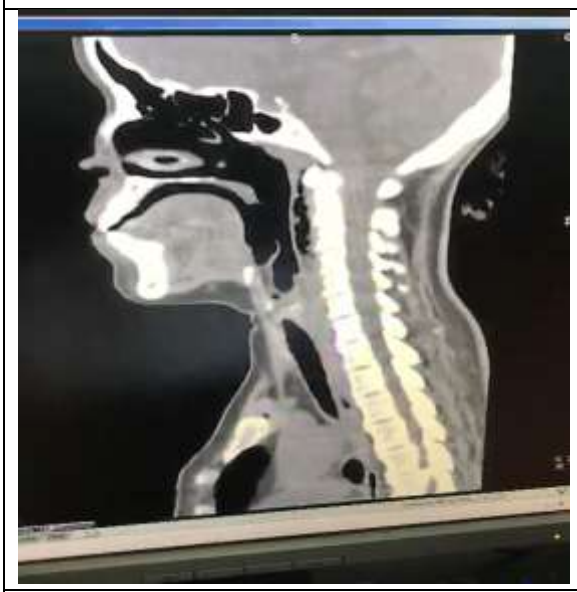

figure-2: **CT scan showing retro pharyngeal abscess**

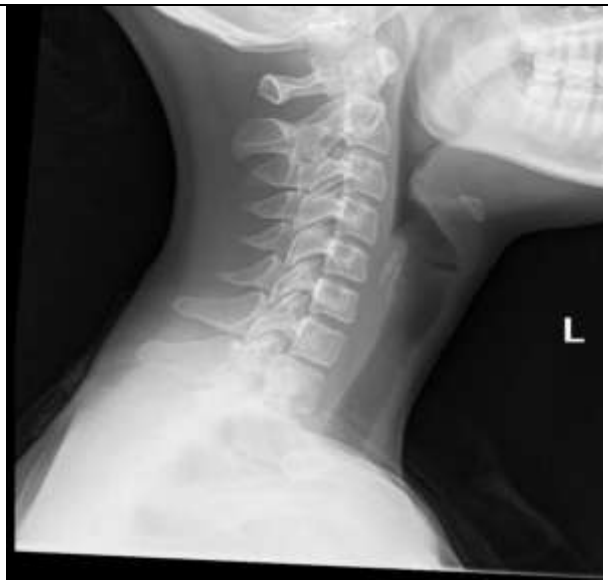

Figure-3: **Normal x-ray lateral view neck**

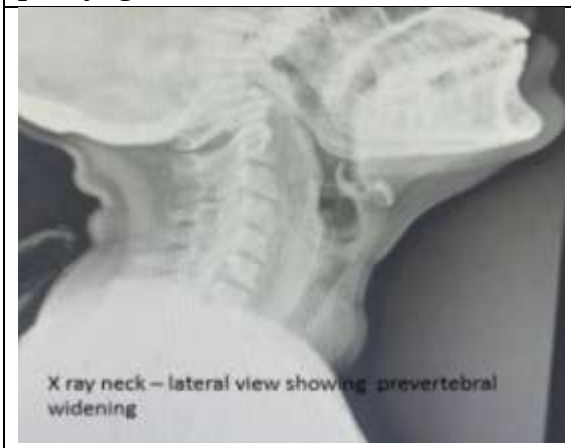

Figure-4: X ray neck lateral view showing

prevertebral widening	

Imaging

- Plain X-ray lateral view neck was adequate in all the cases. However,
- CT Scan : it was taken in all the patients to rule out lesions elsewhere in the neck like para pharyngeal space etc. and lymph nodes of the neck. None of the patients presented with cervical lymphadenopathy.

Complete blood picture, urine analysis ,renal and hepatic parameters were done and found to be normal.

Treatment:

Culture sensitivity reports revealed

1. 9 patients with E. coli (7 males and 2 females). Injection gentamicin was the drug in the report and all the patients recovered within 5 days. Surgical treatment of incision and drainage was required in three patients and they recovered uneventfully.
2. Three of the patients revealed klebsiella with sensitivity to cefepime and imipenem. Two of the patients recovered and one patient with a history of past prolonged medication in a rural area could not be saved due to multi drug resistance.

DISCUSSION

Acute retro pharyngeal abscess is a rare condition. In south India it's a common practice for the people to clear the mucus from the throat by introducing fingers into the throat and inducing vomiting. In all the patients of our study the same was the common feature. The foreign body sensation due to injury induced with fingers with inadequately manicured nails encourages them to induce further nausea to extrude the imaginary foreign body. This trauma turns the tissue susceptible. It must be the most possible reason for infection with E. coli in the majority of the conditions due to regurgitation of intestinal contents during vomiting. However, other less common etiological factors such as tuberculosis, syphilis and vertebral fractures must be ruled out with appropriate clinical evaluation and investigations.

de Clercq LD et al[4] in its paper on retropharyngeal abscess in adults have stated that patients usually present with fever, odynophagia, dysphagia, dyspnoea, drooling, cervical rigidity (torticollis), a 'hot potato' or hyponasal voice, and sepsis.[4] While on inspection one might see a bulging of the pharyngeal wall. The mucosa itself may be swollen and inflamed.[1,4] The most common presentation in our series of patients was acute onset progressive odynophagia, dysphagia and neck swelling suggesting an underlying acute inflammatory condition. However, none of our patient had any features of sepsis at presentation.

The causative organism can vary depending on the source of infection. Most cases are polymicrobial and involve both aerobes and anaerobes.[4,5,6] In our case series one of the patient cultured for E coli while another culture positive for Staphloccoccus aureus. Culture

report guides the choice of antibiotics. However, in the absence of a positive culture report the management should include aggressive broad spectrum injectable antibiotics.

CECT of the head and neck is the radiological investigation of choice to confirm the diagnosis and evaluate for spread of infection into adjacent deep neck spaces.[7] This was the primary modality of investigation in all our cases. Other radiological investigations include plain radiograph, ultrasonography (USG) and magnetic resonance imaging. USG is especially useful because of its easy availability, bedside procedure, guided aspiration of pus, avoids radiation exposure and repeat follow up imaging.

The most worrisome complications of acute retropharyngeal infection are airway compromise and rupture of an abscess leading to aspiration pneumonia. Patients who have signs of airway compromise should be taken immediately to the operating room for securing the airway. One of our patients had a compromised airway at presentation and was referred to us with an endotracheal tube in situ. Fiber optic nasotracheal intubation under local anesthesiais especially useful in patients who have severetrismus but whose airways are otherwise uncompromised.[8]

Surgical intervention is the mainstay of treatment for more complicated or severe cases of deep neck space infection. Indications for surgery include airway compromise, critical condition, septicemia, complications, descending infection, diabetes mellitus, or no clinical improvement within 48 hours of the initiation of parenteral antibiotics. Abscesses greater than 3 cm in diameter that involve the prevertebral, anterior visceral, or carotid spaces, or that involve more than two spaces, should be surgically drained.[8] Surgical drainage can be performed in several ways, including simple intraoral or extraoral incision and drainage for superficial abscesses, a more extensive external cervical approach for deeper and more complicated infections. Large and multilocular abscesses usually require incision and drainage. The ideal time to make the drainage is in dispute. Some suggest local antibiotic injection at the same time as surgical drainage. In our study the use of surgical drainage was required in only two cases (cases of diabetes and tuberculosis); in other cases, the puncture of the abscess and the antibiotics were respectively sufficient to control the collection and to obtain a favorable outcome. Antibiotic of choice based on culture sensitivity and incision and drainage wherever necessary is curative.

CONCLUSION :

Adult non specific acute retro pharyngeal abscess should be considered in provisional diagnosis of adults with odynophagia and swelling on posterior pharyngeal wall on video laryngoscopy in both healthy and immunocompromised individuals with or without trauma.

Timely intervention with appropriate antibiotic and incision drainage if necessary could prove life saving.

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