

# Calcified Posterior Part of Cricoid Cartilage presenting as Foreign Body complicated with Retropharyngeal Cellulitis

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## Introduction

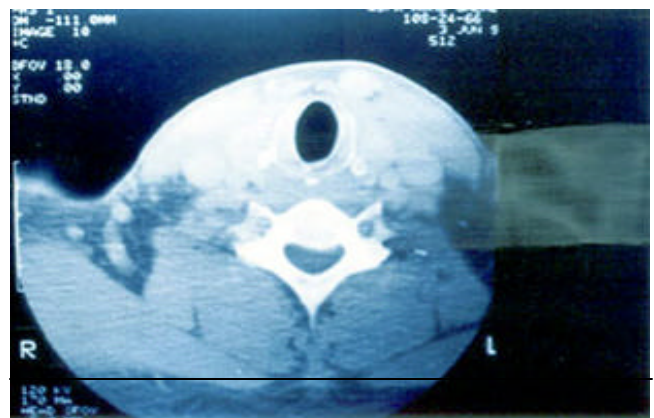
Retropharyngeal cellulitis / abscess were very commonly seen in children in the past usually associated with oropharyngeal infection.<sup>1,2</sup> Adult retropharyngeal cellulitis / abscess also occur due to trauma, infections, foreign body, impaction, and spread of infection to adjacent foci.<sup>1-4</sup> Calcification of the posterior part of cricoid cartilage, arytenoid cartilage or posterior aspect of the thyroid cartilage can be interpreted or confused as FB.<sup>5</sup> We present a case of calcification of cricoid cartilage depicting as FB in the retropharyngeal space associated with features of retropharyngeal cellulitis. Plain radiograph of Lateral soft tissue neck with CT scan can help in confirming and elucidating the identity of radioopaque shadow in that space for further management.<sup>1,5-7</sup>

## Case Report

A 49 years old male doctor attended ENT clinic with history of sore throat, irritation in the throat for two days associated with mild dysphagia. He gave no history of swallowing any foreign body. Case was treated as acute pharyngitis. Three days later he presented with severe pain in the throat and dysphagia even for liquids. There was a past history of hypertension controlled on medication. Detailed history revealed that five days earlier he had eaten chicken with rice in a restaurant. Since then he had been suffering from sore throat and dysphagia with increasing severity.

On examination, he was pyrexia with stable general condition and other vital signs. The oropharynx was severely congested, uvula edematous, and indirect laryngoscopy revealed angry red pharyngeal wall, with pooling of saliva, obstructing the view of hypopharyngeal area. Vocal cords were difficult to visualize. There was diffuse swelling with tenderness over the thyroid region externally and anterior part of the neck. Other ENT and systemic examination were normal.

He was admitted and was given IV antibiotics, analgesics with IV fluids. Routine blood picture showed mild increase in WBC count. Lateral soft tissue radiograph of the neck showed a retropharyngeal swelling with query radioopaque F.B. shadow at cricopharynx. (Figure 1). CT scan of neck showed a thin elongated calcific density query in the anterior wall of the beginning of esophagus in close proximity to the cricoid cartilage, penetrated intramural FB or calcified part of cricoid was the interpretation by the radiologist (Figure 2).



Patient underwent esophagoscopy, FB was not seen, but pharyngeal mucous membrane was severely congested up to cricopharynx with mild bulge. Repeat x-ray soft tissue neck after treatment of five days, showed decreased



retropharyngeal space swelling, but radioopaque shadow was still present. Patient was discharged with further conservative treatment following marked improvement in the symptoms.

Repeat x-ray soft tissue neck after 5 months, one year and in the third year still shows the radioopaque shadow in the same place.(Figure 3). On consideration of all the clinical data and discussion on the x-ray findings the diagnosis of calcification of posterior cricoid cartilage associated with retropharyngeal cellulitis was made.

### Discussion

Adult RPC/RPA occurs after trauma, infections, and perforating FB.<sup>1-4</sup> Calcification of the arytenoid cartilage or the posterior aspect of thyroid cartilage and calcification of posterior part of lamina of cricoid cartilage can be confused as a FB on radiograph.<sup>5</sup> The co-existence of symptomatic RPC with calcified part of cricoid cartilage mimicking as FB is an uncommon entity. This may complicate the clinical picture and diagnosis, as well as management. Our presented case had symptoms of RPC and lateral x-ray neck and CT scan revealed a radioopaque shadow in this area. An immediate endoscopic therapeutic procedure on the retropharyngeal swelling did not reveal any FB. Patient improved clinically on conservative treatment but follow up x-rays still showed the radioopaque shadow in the same position. The protocol for early



endoscopy in such cases with prompt incision and drainage if needed avoids further complication mainly respiratory obstruction.<sup>3,8,9</sup>

Lateral x-ray neck is supposed to be very specific in diagnosing the lesion of retropharyngeal space, but CT scan with contrast helps in localising the radiopaque shadows with certainty, which ultimately guides the management of such cases.<sup>1,5-7</sup> Non-contrast magnetic resonance imaging has also proved a good investigation in localizing the FB.<sup>10</sup>

Management of submucosal and deep seated FB complicated by cellulites and abscess in the retropharyngeal area can be managed by an intraoral or external route. Internally it is done by rigid and flexible endoscope and externally it can be removed by cervicotomy.<sup>11-13</sup>

Our case thus emphasizes that radioopaque shadow in the retropharyngeal area or in close vicinity of this area, even if present after adequate treatment of medical and surgical procedure, should alert the clinician to the possibility of calcified cartilage of arytenoid, posterior part of the lamina of the cricoid, or posterior part of thyroid respectively. Follow up lateral cervical radiographs, CT scan, and tomography can help in confirming the diagnosis.

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