

## Case Report

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# Life Threatening Transverse-Lying Vegetable Foreign Body in the Larynx; A Case Report

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## Abstract

**Introduction:** Foreign body (FB) in throat is one of the common presentations in emergency departments (ED). The foreign body may be stuck in the neck region through ingestion or due to iatrogenic injury. FB ingestion is rare in adults but still occurs. The ED treatment plan for patients suspected to have ingested a foreign body depends on the type and location of the FB, as well as the patient's condition. In adults, the most common FBs ingested are chicken bone and fishbone. The ingested FB often gets lodged in the oropharynx and cricopharyngeal muscle regions.

**Case presentation:** We report a 15-year-old female patient who presented with a foreign body in the throat. Lateral neck radiograph (LNR) revealed a radio-dense vegetable foreign body in the supraglottic region, lying transversely above the vocal cord. This is an unusual clinical and radiological presentation. A 4-cm long piece of beetroot was removed successfully via direct laryngoscopy under safe procedural sedation. Post-procedure, the patient recovered well, discharged within a few hours.

**Conclusion:** Even though foreign body in throat is a common presentation, we report this case due to its anatomical position, type, size, and the unusual radiological appearance of the FB.

**Key words:** Adolescent; Foreign Bodies; Larynx; Vegetables

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## INTRODUCTION

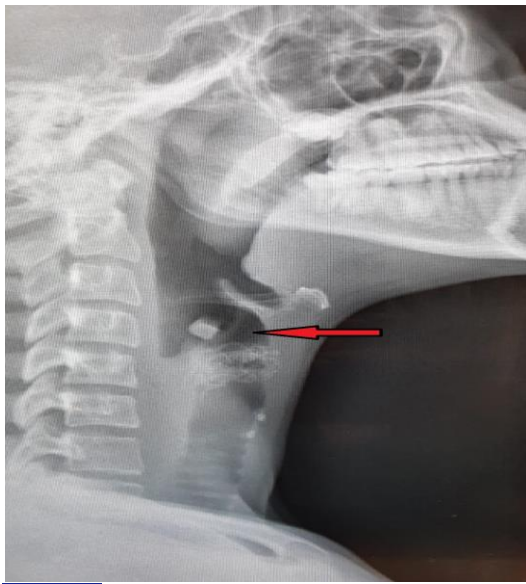
Although laryngotracheal Foreign bodies (FB) are less common than bronchial ones, they are potentially life threatening (1). Foreign body aspiration (FBA) in adults often occurs in the sixth or seventh decade of life, because of the inadequate airway protective mechanisms. Common types of FBs aspirated in adults are pieces of bones, vegetables, tiny parts of dental prothesis, and tablets (2). This is a case report about an adolescent patient with FBA, a vegetable foreign body got stuck in the larynx, transversely lying in the supraglottic region.

## CASE PRESENTATION

A 15-year-old female adolescent presented with throat pain to the tertiary care hospital emergency department (ED) with her mother. Few hours before presenting to the ED, the patient was eating salad containing beet root. She accidentally swallowed a piece of beet root without chewing it well. She immediately developed severe throat pain, cough, breathing difficulty, and bluish facial discoloration. Most symptoms resolved except for

throat discomfort and FB sensation.

During initial assessment in the ED, the patient was conscious, oriented, able to talk but with difficulty, and had a feeling of something being stuck in her throat. Her initial vital signs were as follows: heart rate (HR) 80/min, respiratory rate (RR) 22/min, blood pressure (BP) 106/72mmHg, and O<sub>2</sub>saturation 100% in room air. Upon further examination she was not in respiratory distress, there was no hoarseness of voice and no drooling of saliva. Ear-nose-throat (ENT) examination did not reveal any abnormality. Chest examination revealed equal air entry on both sides with no added sounds. The lateral neck plain radiograph revealed a radio-opaque FB in the supraglottic region lying just above the vocal cord (Figure 1). The patient was shifted to the emergency operation theatre after the on-call ENT surgeon's review. The uniqueness of the FB was that it got transversely stuck in the supraglottic region above the vocal cords (Figure 2). A 4-cm long vegetable FB (beet root, Figure 3) was successfully removed via direct laryngoscopy under safe procedural sedation. After



**Figure 1:** lateral neck plain radiograph reveals a radiopaque foreign body in the supraglottic region, at C4 level



**Figure 2:** Direct laryngoscopic view shows transversely lying foreign body in the supraglottic region



**Figure 3:** Removed foreign body

a brief period of post-procedure observation, the patient was discharged home with ENT outpatient clinic follow up.

#### DISCUSSION

To the best of our knowledge, vegetable foreign body in the larynx has not been reported yet. This is the first case report of vegetable foreign body (a piece of beetroot) getting stuck in the larynx, just above the vocal cords, which was successfully removed as a whole.

The most common location for a foreign body in the airway in adults is the right bronchial tree, mainly in the right lower lobe and intermediate bronchi, due to the vertical orientation of the right main bronchus (3-5). Our case is an interesting one, because the vegetable FB was transversely stuck in the supraglottic region above the vocal cords, which is not very common.

FBA is rare in adults and adolescents with a normal swallowing reflex. Most adult cases are in their sixth or seventh decade of life, when airway protective mechanisms may not function properly (2). Food particles are frequently aspirated due to incomplete chewing or poor swallowing function (3).

Traditional emergency medicine teachings state that lateral neck radiograph (LNR) is indicated only when there is a suspicion of solid FB like a bone, metal, or teeth. This case raises a query whether we should do LNR routinely, even for a vegetable FBA. LNR is the first-line imaging tool in the ED for patients with suspected FB ingestion (6). The goals of performing a plain radiograph are to identify and locate the FB, rule out alternative disorders, and detect possible complications such as extraluminal gas, deep neck infection, or abscess (6). Plain radiography, especially LNR, is a simple, inexpensive, and accessible tool that can be used to identify most FBs, confirming their location, size, shape, and number, making further imaging unnecessary (6). In cases that the initial oral examination has a negative result, such as our case, the detection rate of FB via LNR is 70% (6). The LNR of our case (Figure 1) shows a well-defined tilted cuboid shaped radio-opaque shadow in the supraglottic region. The pharyngeal air lumen dimensions are maintained. Prevertebral soft tissues are unremarkable. The radio-opacity of the foreign body, which is a vegetable (beet root), is increased due to superimposition of the rectangular prism-like vegetable, which was a salad cut piece. Beet root has a high concentration of minerals like calcium, magnesium and manganese, which increases the radio-opacity of

the vegetable foreign body (7). Anteroposterior view was not taken in this patient to adhere to as low as reasonably achievable radiation safety principle (8).

### CONCLUSIONS

Airway foreign bodies mostly present as emergencies. FBA is uncommon in adults, requires definitive aspiration history or suspicion for diagnosis. Plain LNR is a simple, inexpensive, and accessible technique for confirmation. Our case was a unique one, because of the location and position where the FB was stuck in the supraglottic area and the visibility of the FB in LNR in spite of being a vegetable FB. Early ENT consultation for the removal should be considered.

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### AUTHORS' CONTRIBUTION

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### CONFLICT OF INTEREST

None declared

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