

Impacted Denture in Supraglottis – A Case Report



Medical science

KEYWORDS : Supraglottis, Denture, Hypopharynx

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ABSTRACT

Foreign body in the larynx is uncommon because they are either coughed out or cause fatal obstruction within a few minutes. Foreign body in aerodigestive tract is common in small children because they have got tendency to put any thing in the mouth. Foreign body in adult is rare and found in psychotic person and due to carelessness. We are reporting a case of 35 year male patient with foreign body (denture) in the supraglottic region who came to our emergency department with respiratory distress, throat pain and dysphagia. Patient was made stable by medical management and oxygen inhalation. Then it was removed by direct laryngoscopy under superior laryngeal nerve block (local anaesthesia). Patient became completely asymptomatic once the foreign body was removed from the site. We are reporting this case for its rare occurrence and difficulty in management.

Introduction

Depending on the size and nature, a foreign body may lodge in the larynx, trachea or bronchi. Large foreign bodies which can not pass through glottis get lodged in supraglottic region. A small foreign body easily passed down in to the trachea or bronchi. Foreign bodies in upper aerodigestive tract are mostly accidental. Foreign body in hypopharynx causes dysphagia and in air passage causes dyspnoea and stridor. Both the cases need emergency removal. It can be done either under local or general anaesthesia depending upon the site of lodgment.

Case Report

A 35 year old male patient came to casualty department with respiratory distress, severe throat pain and dysphagia both to solid and liquid since 2 hours following a fall from the height. On taking proper history we came to know that patient was using a five toothed denture in the upper jaw which was missing after the fall.

On examination patient was having mild stridor and respiratory distress with sweating. Pulse was 100/min, respiratory rate was 30/min and oxygen saturation was 90. Immediately patient was given one dose of hydrocortisone injection 100mg intravenous followed by oxygen. Within 15 min patient became stable and comfortable for other investigations.

X – ray neck antero-posterior and lateral view showed only a faint soft tissue shadow in the supraglottis region obliterating the air passage suggesting a radiolucent foreign body. Videolaryngoscopy was done for the patient. It showed a big impacted denture in the supraglottic region found hooked into the epiglottis and aryepiglottic fold. Very little space was visible on the posterior part of the denture and vocal cord or the glottis region was not at all visible. Mucosa was seems to be mild edematous surrounding the foreign body.

As laryngeal inlet was totally blocked, general anaesthesia was denied by anesthetist. Other options for us were either anaesthesia is to be given after tracheostomy or under local anaesthesia by giving laryngeal block. We gave preference to local anaesthesia and kept the instruments ready for tracheostomy if needed during the procedure. Anesthetist was kept stand by.

Patient was given mild sedative by anesthetist, 10% lignocain spray was applied in to the oral cavity and pharynx. Superior laryngeal nerve block was given with 2% lignocain and 1:200,000 adrenaline by passing the needle above the hyoid bone and infiltrating about 3ml on each side of neck.

Direct laryngoscopy was done and foreign body was visualized. Foreign body was found to be impacted and hooked in epiglottis and aryepiglottic fold. Denture was caught with foreign body grasping forcep and its hooks were unhooked by pushing it in

opposite direction. Foreign body was ultimately retrieved by multiple attempts and pushing in different directions.

Immediately after removal of foreign body (denture) patient became asymptomatic. Stridor and respiratory distress decreased. Patient became stable and all the vitals became normal.

Ryle's tube was given and patient kept nil orally for 48 hours. During post operative period patient was treated with intravenous antibiotics, analgesics and i.v fluids. Patient was discharged after 72 hours.

Discussion

Foreign bodies in the larynx are uncommon because they are either coughed out or cause fatal obstruction within a few minutes if help is not to hand.(1).

Foreign body in aerodigestive tract are common in small children because they have got tendency to put any thing in the mouth.(2). Playing while eating is another factor. Foreign body in adult is found in psychotic person and due to carelessness. Sometimes it is due to loss of protective mechanism due to use of upper denture which prevent tactile sensation and a foreign body is swallowed undetected. Esophageal stricture and carcinoma are other causes of foreign body in adults.

Foreign body remains in trachea when its size is greater than the tracheal lumen or in case with sharp foreign body when it gets impacted (3).

Patient in coma, deep seep, alcohol intoxication or anaesthesia can inhale food, saliva, liquids, denture and blood. Coughing, laughing, talking, crying or tapping on back during swallowing can result in inhalation of food in to air passages. Paralysis of pharynx and larynx due to IXth and Xth cranial nerve palsy is another cause of aspiration problem (4).

There are different types of foreign bodies like non-irritating and irritating types. Nonirritating types are plastic, glass or metallic items which may remain symptomless for a long time. Irritating types are vegetables (peanuts, beans, other seeds) which can cause diffuse reactive congestion and edema of the trachea-bronchial mucosa (Vegetable bronchitis). They may swell up and cause airway obstruction and pulmonary supuration.

Manifestations of foreign body larynx depend upon site, size, shape and nature of the foreign body, the amount of obstruction, inflammation and trauma to the airway. Patient may die within minutes in case of a large foreign body in air passage. Small foreign body can presents with throat discomfort, hoarseness of voice, croupy cough, aphonia, inspiratory stridor, dyspnea and hemoptysis.

A sharp foreign body in trachea produces cough and hemoptysis. A small seed in trachea may move up and down produce audible slap, tracheal flutter and respiratory thud. It may produce biphasic stridor.

Bronchial foreign bodies are common in right bronchus because it is wider and more in the line with the tracheal lumen. It may cause atelectasis of lobe or obstructive emphysema and sometimes spontaneous pneumothorax due to rupture of emphysematous bulla.

It can be diagnosed by x-ray soft tissue neck postero anterior and lateral views in extended position, x-ray chest postero anterior and lateral views, videofluoroscopy, bronchogram and sometimes with CT scan. Laryngoscopy and Bronchoscopy are used both for diagnostic and therapeutic purpose.

In the acute situation the foreign body can be removed using Heimlich's maneuver. If it fails then next option is the cricothyrotomy or emergency tracheostomy. Once the patient is stable we can go for direct laryngoscopy and removal of the foreign body usually under general anaesthesia. Tracheal and bronchial foreign bodies are removed by rigid bronchoscopy under general anaesthesia and jet ventilation. Rarely patient may require thoracotomy, bronchotomy, lobectomy or laryngofissure etc.

Conclusion

Foreign body larynx is common in small children, but rare in

adult. Many times it may be dangerous due to its nature of respiratory obstruction. This is a case of big denture in the supraglottic region causing both respiratory distress and dysphagia which was removed by local anaesthesia ie; superior laryngeal block. Immediately patient became asymptomatic after removal of foreign body. We are reporting this case for its rare occurrence and difficulty in management.



(Impacted denture in the Supraglottis)

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