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Case Report:

An unusual foreign body of esophagus

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Abstract:
We report a rare case of an unusually long foreign body (Datun) impacted in the esophagus of a 56 year-old gentleman. He was literate, without any psychiatric illness and had been using "Neem" (Azadirachta indica) stick for cleaning his teeth for the past twenty years. Neem sticks are used for brushing teeth, perhaps one of the earliest and very effective dental care. On closer questioning he revealed his habit of passing the Neem stick into his throat with the aim of cleaning it too while cleaning his teeth. He presented to our emergency early in the morning with this strange long foreign body impacted in his esophagus which was removed successfully using a Jackson's adult rigid oesophagoscope. We believe this to be the first case of such an unusually long foreign body to be reported in the literature.

Key Words: Foreign body, Esophagus, Neem stick

Introduction:

Majority of ingested foreign bodies, particularly if they are smooth or smaller than 12 mm in diameter will pass safely through the gastrointestinal tract. Severe problems such as perforation may occur in some circumstances, for instance, following ingestion of sharp objects, bone fragments, pins or long foreign bodies (greater than 6.5 cms).[1] The postcricoid region is the site of impaction of foreign bodies in 84% of the subjects. Impaction of a bolus of food in the distal esophagus in adults is frequently related to pre-existing stricture, diverticulum or tumour.[2] Adult with non food foreign bodies have a high incidence of psychiatric and social derangements.

Most foreign objects will pass through the pylorus, although on occasion, some objects may remain in the stomach for a long period. Once beyond the pyloric canal most objects, even sharp edged foreign bodies such as pieces of glass or nails, will pass without harm until the terminal ileum which is again a site of predilection for impaction. Ingested foreign bodies may occasionally remain fixed in the caecum, ascending colon or sigmoid colon. Non contrast CT scan is indicated for diagnosing suspected upper esophageal foreign bodies not expected to be visible on plain radiography[3] and in order to rule out perforation.[2]

Case Report:

Fifty six year old gentleman, presented to the emergency services early morning with complaints of difficulty in swallowing, pain on swallowing, drooling of saliva and pain in the chest following the accidental ingestion of "datun" with which he was cleaning his teeth. Datun is nothing but a wooden stick which is taken afresh from the branch of a tree usually Neem (Azadirachta indica). The Neem has medicinal value in dental care. One end of this stick is chewed and is used as brush to clean the teeth. Usually it is about 12 – 15 cms long but this patient was in habit of cleaning his throat and upper esophagus and hence was using an extra long datun. He had been using this for the last twenty years & on many occasions it got stuck inside but he could retrieve it. This time he couldn't retrieve it and landed in emergency department. He was literate, without any chronic disease and at presentation there were no symptoms of respiratory distress or hoarseness. The general physical examination was unremarkable except that he was looking anxious. Examination of the ear, nose and throat was all within normal limits and on indirect laryngoscopy there was pooling of saliva in both pyriform sinuses. An X-ray of the neck and chest region AP and lateral view was unremarkable. Subsequently a CT scan of the neck and chest region revealed a long radio opaque foreign body in the whole length of the esophagus and also impinging into the stomach. (Fig. 1, 2). So a diagnosis of foreign body esophagus was made and the patient was subjected to rigid esophagoscopy under general anaesthesia. Using an adult oesophagoscope, upper end of the foreign body was encountered just beyond the cricopharynx and it was grasped securely with a grasping forceps and 37.5 cm long wooden foreign body was removed along with the Jackson's rigid esophagoscope (Fig. 3). A check esophagoscopy was done and revealed no injury to the oesophageal mucosa .The post operative period was uneventful and the patient was allowed orally after 12 hours.

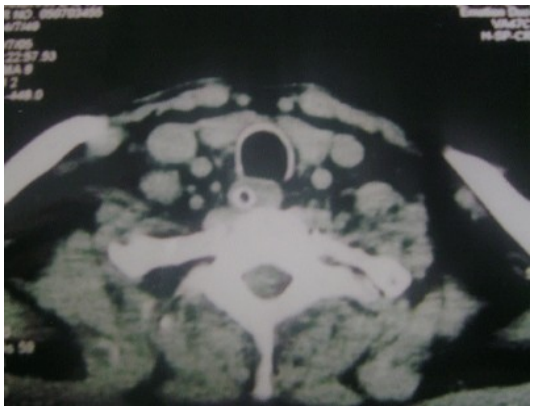

Figure 1: Axial CT scan of Chest with foreign body in the esophagus.

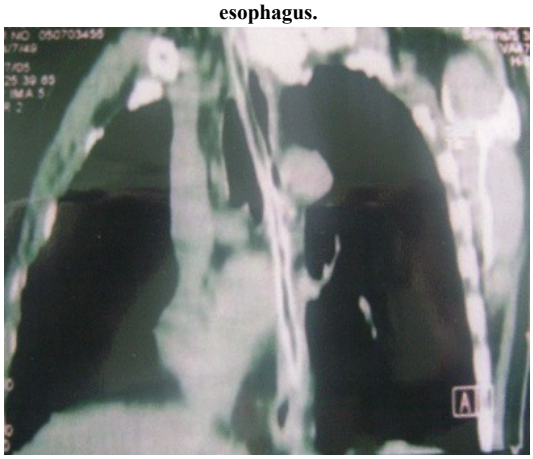

Figure 2: Coronal CT scan of Chest with foreign body in the esophagus

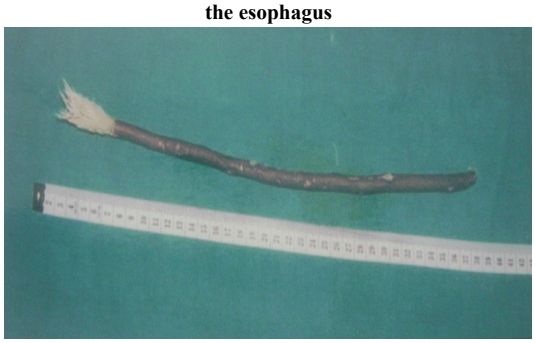

Figure 3: Removed foreign body.

Discussion:

A foreign body impacted in the esophagus requires immediate attention and treatment. Review of literature reveals that dysphagia (92%) and tenderness in neck (60%) are the most common clinical features. Majority (89%) patients come to the hospital within 24 hours. X-ray of the neck (lateral view) is the most useful investigation with presence of air in the esophagus being a significant finding.[4] Most foreign bodies are more or less radio opaque and will be readily recognized on a plain radiograph. Their progress in the bowel, if needed can be checked periodically. Ingested bone fragments appear as linear or slightly curved densities with sharp margins. However, some foreign bodies such as small fish bones or pieces of plastic and wood are only faintly radio opaque and their detection may require a CT scan. Foreign bodies in hypopharynx and cervical esophagus such as chicken & fish bones usually need radiologic workup. Non contrast CT scan may demonstrate these small calcified esophageal foreign bodies.[5] Indirect signs visible on plain radiography are soft tissue swelling and/or air due to oedema or haematoma. In doubtful and suspected perforations oesophagography should first be performed with hydrosoluble contrast medium to exclude perforation & study can then be completed with a barium examination. The contrast medium may impregnate the surface of the foreign body and render it more conspicuous. Radiographic signs of impaction in the distal esophagus are dilatation of the esophagus proximal to the obstruction with air fluid level as well as absence of air in the fundus of the stomach. Post-cricoid region is the site of impaction of foreign bodies in 84% of the subjects. The procedure of esophagoscopy is successful in 97% of the patients and fails in 3%. Coins are the most common foreign bodies (60%), followed by meat related foreign bodies (22.5%) and dentures in 5% cases. Complications occur in 18% patients and are more common in adults (37.1%) compared to children (8.8%). The most serious complication is pneumo-mediastinum. Maximum complications occur with dentures (80%) and bone chips (42%).[4] Foreign body in the esophagus is a serious condition and early removal by rigid esophagoscopy is recommended which is a safe and effective procedure. The other modalities of treatment involve removal with a laryngoscope in case of foreign bodies impacted in the pharynx, hypopharyngoscope for hypopharyngeal foreign bodies and less easily foreign bodies are removed using a flexible esophagoscope. The common complications occurring while using a rigid oesophagoscope are injury to the lips, teeth tongue, palate and esophageal perforation which commonly occurs at the level of cricopharyngeal sphincter. Complications can be reduced if treatment is started within 24 hours of foreign body impaction.[6]

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