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Case Report

Extraluminal migration of foreign body and its removal by lateral pharyngotomy and intraoperative C-arm

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ABSTRACT

Ingested foreign bodies are not unusual in Manipur. The most common of these are fish bones, which usually gets impacted in the tonsils, base of tongue or at the level of cricopharynx. Sometimes few may migrate extraluminally, or even extrude subcutaneously. We report a case of an ingested foreign body (beef bone) which had migrated to retropharyngeal space requiring lateral pharyngotomy using C-arm guidance for removal.

Keywords: Beef bone, Extraluminal, Migrating foreign body

INTRODUCTION

Foreign body in throat is common emergency encountered in routine otolaryngology practice. Foreign body which we commonly encounter in the upper aerodigestive tract include metallic i.e. coin, safety pin, needle, battery and non-metallic i.e. fish bone, chicken bone, meat bone, and artificial dentures. There are very few reported cases of foreign body in the hypopharynx. Pharyngeal foreign body get lodged in the mucosa and may not be visible on routine clinical examination.[1] Ingested foreign body can present life threatening emergencies if left untreated. They usually get impacted in the tonsils, base of tongue and upper oesophagus.[2] Presenting symptoms are odynophagia, dysphagia, neck pain, chest pain, choking sensation. Trial of removal can be done under direct or endoscopic vision, failing which removal can be attempted under general anaesthesia. A computed tomography (CT) scan can help to locate the site of foreign body to assist removal. Most foreign body are able to pass through the gastrointestinal tract spontaneously, 10-20% require non operative intervention while less than 1% require surgical intervention.[3] Migration of foreign body extraluminally is rare. Herein, we report a case in which the beef bone had migrated to the retropharyngeal space, requiring lateral pharyngotomy using C-arm guidance for removal.

CASE REPORT

A 34 years old male patient presented at otorhinolaryngology emergency with history of accidental beef bone ingestion. He presented with foreign body sensation in throat along with dysphagia, odynophagia, neck pain. Oral examination was unremarkable. Laryngeal crepitus was impaired. Laryngeal framework was tender on palpation. Indirect laryngoscopy showed congested and oedematous posterior pharyngeal wall and arytenoids, otherwise no foreign body was noted. X ray soft tissue of neck – lateral and anteroposterior views reveal a radio-opaque foreign body at the level of C4 vertebrae with loss of cervical lordosis and retropharyngeal abscess (Figure 1a and b).

After proper consent, antiseptic dressing and draping with proper patient positioning, direct laryngoscope was introduced. However, due to edematous posterior pharyngeal wall mucosa, foreign body could not be visualised. With the help of C-arm the exact location of the

foreign body was identified (Figure 2). Left lateral pharyngotomy was performed by making transverse incision at the level of lower border of thyroid cartilage. Subcutaneous tissues and platysma were incised along the line of incision. C-arm was used to precisely identify the location of foreign body. Foreign body was found to be impacted in the retropharyngeal space and was gently removed without any inadvertent injury to the adjacent mucosa (Figure 3a) and it was of 2.4 cm length (Figure 3b).

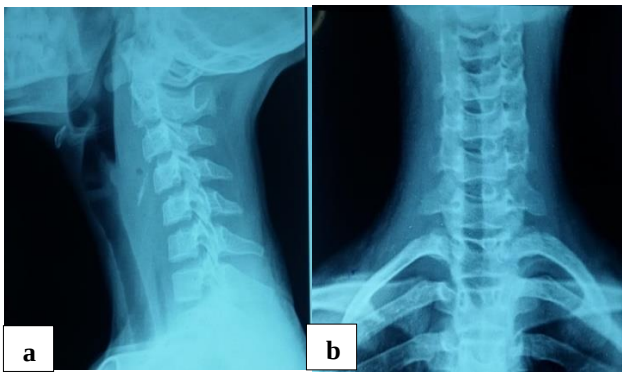

Figure 1 (a and b): Lateral and anteroposterior radiograph of the patient showing radio opaque foreign body at the level of C4 vertebral body.

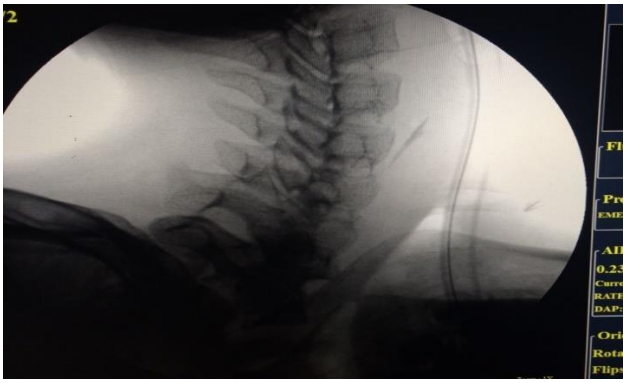

Figure 2: Per operative localisation of foreign body using C arm.

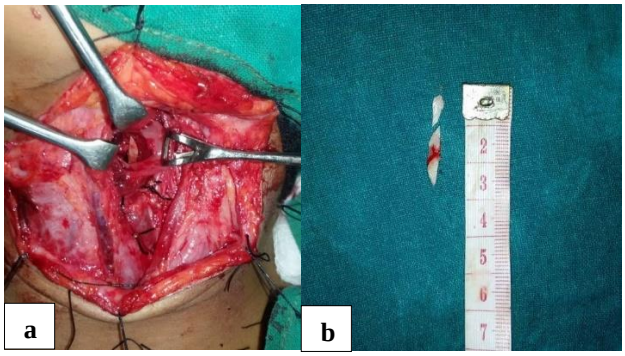

Figure 3 (a and b): Neck exploration showing beef bone in the retropharyngeal space and beef bone after removal.

Nasogastric tube was inserted, hemovac drain was placed, pharyngeal mucosa was repaired and the wound was closed in two layers. Postoperatively patient was placed nil per oral. Hemovac drain was removed on postoperative day 3. Patient was on ryle's tube feeding for 5 days. Pharyngeal fistula was excluded by barium swallow and oral feeds were started. No postoperative complications were noted.

DISCUSSION

Accidental foreign body ingestion is a common emergency in ENT practice. Swallowing of foreign bodies occurs more commonly in children, especially between the age of 6 months and 3 years, and in specific adult risk groups such as prisoners, alcoholics, edentulous adults and psychiatric patients.[4] Most foreign body gets impacted at the level of cricopharynx, rarely they may migrate extraluminally, and are usually associated with late presentation to seek medical treatment.[5] Remsen et al reported that out of 321 cases of penetrating oesophageal foreign bodies, 43 migrated extraluminally.[6] Extraluminal migration of foreign bodies can cause serious life-threatening complications. Some complications include oesophageal perforation, mediastinitis, abscess formation, airway compromise and vascular complications.[7] History of ingestion of foreign body, inability to swallow saliva and dysphagia are most important symptoms with which a patient usually presents to hospital.[8]

Our patient presented late with history of definite ingestion of foreign body along with foreign body sensation in throat, dysphagia, odynophagia and neck pain. X ray soft tissue neck – lateral and anteroposterior views should be advised to look for the presence of foreign body. If the impacted foreign body is radiolucent, in the presence of positive history or clinical suspicion, computed tomography of neck and thorax may be essential. Initial attempt of foreign body removal can be done under direct or endoscopic vision. The next option is rigid instrumentation or flexible endoscopy. The success rate for rigid instrumentation ranges from 94% to 100%, while flexible endoscopy is between 76% and 98.5%.[9] If all the method fails, neck exploration with the assistance of C-arm is recommended.

In our case, X ray soft tissue of neck – anteroposterior and lateral views revealed a radio-opaque foreign body at the level of C4 vertebrae with loss of cervical lordosis and retropharyngeal abscess. Under general anaesthesia, attempt was made to remove foreign body via direct laryngoscopy. Only the entry point was seen and pus was coming out from posterior pharyngeal wall abscess area. Since the foreign body was very close to the vertebrae, we decided to remove it by lateral pharyngotomy. C-arm was used to locate the foreign body and to reduce the chance of injury to the surrounding structures during removal. Prolonged post-operative observation is indicated in this circumstance due to risk of developing delayed complications.

CONCLUSION

Extraluminal migration of foreign bodies is a rare occurrence. Late presentation in seeking professional help is a predictive factor. A high index of suspicion is required when endoscopy fails to identify a foreign body. CT scan of the neck helps in identifying the exact location and appropriate approach for the removal of foreign body. By knowing the relation of important structures with the foreign body, we can minimize the risk of complications such as bleeding and nerve injury during neck exploration and retrieval of the foreign body. It is always mandatory to give due respect and care to the complaints of the patient and do a proper ear, nose and throat examination, get the investigations done as needed so as not to under diagnose the case or leave a foreign body and give constant irritation and misery to the patient. Under diagnosis and delay in presentation may increase the complications and fatality of the cases.

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