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Case Report

A neglected foreign body in oesophagus with an unusual presentation: a case report

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ABSTRACT

Foreign body ingestion is clinical emergency in otorhinolaryngology practice which requires immediate proper management to ensure speedy recovery and reduce complications. Accidental ingestion of food based foreign bodies like fish and meat bones are common among adults. Penetration of these foreign bodies may cause vascular or suppurative complications which are rare; however, if present these can cause significant morbidity to the patient. We report a case of 60-year-old male patient who presented with painful right side neck swelling. The CT nscan neck revealed a foreign body penetrating oesophageal wall on either side leading to right cervical abscess and mediastinitis. Under general anaesthesia foreign body bone piece was removed by rigid oesophagoscopy. In conclusion, it is very important to elicit the history of accidental foreign body ingestion in patients who present with acute onset of neck swelling. Besides clinical examination, radiological imaging modalities are very useful in confirming the diagnosis, site localisation of foreign body and proceed with timely and appropriate management.

Keywords: Foreign body ingestion, Oesophagus, Perforation, Mediastinitis, Oesophagoscopy

INTRODUCTION

Ingestion of foreign bodies is a relatively common clinical emergency encountered in the field of otorhinolaryngology.[1] In western literature, case reports of ingested foreign bodies are predominantly food particles such as chicken and fish bones in India.[2] Oesophageal foreign bodies are more commonly observed in paediatric age group of 6 months to 3 years and in adults particularly alcoholics, prisoners, edentulous and psychiatric patients. It is considered as serious medical condition due to possible complications such as mucosal ulceration, oesophageal perforation, mediastinitis, vascular trauma, tracheoesophageal fistula, paraoesophageal abscess, pneumothorax, and pericarditis.

The complications induced by oesophageal foreign bodies in adults are associated with high mortality rate.[3] However, some patients with oesophageal foreign bodies neglect it considering it as trivial event which prolongs the time in effective management causing greater harm and larger economic burden for the patients.

CASE REPORT

A 60-year-old male patient came to ENT department in tertiary health care centre with complaints of swelling in the right side of the neck associated with pain and odynophagia from 5 days. He had no breathing difficulty and change in voice. He is known smoker and alcoholic with no other comorbidities.

On examination, patient was afebrile, conscious and coherent. His vitals were within normal limits. On neck examination, a diffuse swelling approximately of size 7×3×3 cm was noted on right side of neck extending vertically from lower border of mandible extending inferiorly up to superior border of right clavicle and horizontally from midline extending posteriorly up to anterior border of trapezius. Skin over swelling appears red in colour, tense with no scars, sinuses, ulcer or

engorged veins. On palpation, all inspectory findings confirmed. Swelling was tender, local rise of temperature present, non-fluctuant, and smooth surface with ill-defined margins. Trachea was deviated to left side with no other swellings palpable in the neck.

Figure 1 (A and B): Neck swelling lateral aspect and shows neck swelling anterior aspect at the time of presentation.

For further evaluation patient was admitted in ENT ward. The oral fluids were withheld and IV antibiotics and anti-inflammatory along with parenteral hydration were started and stabilised. The routine blood investigations were performed which showed high total white cell count with other parameters being normal. A contrast enhanced computed tomography scan of neck from skull base to mediastinum with 3D reconstruction was ordered and obtained. It showed a tubular hyper dense foreign body measuring of 28×7×7 mm noted impacted at upper thoracic oesophagus at T2-T3 vertebral level perforating oesophagus on its both lateral aspect measuring approximately 7 mm on either side. Pockets of air noted from right lateral aspect of perforation extending superiorly along superior mediastinum surrounding carotid space on right, pretracheal region deeper to right sternocleidomastoid muscle and posterior triangle of neck with soft tissue edema in subcutaneous plane. Air pockets are also noted in left lateral aspect of perforation extending inferiorly along wall of oesophagus till the level of aortic arch. Right internal jugular vein shows non enhancing hypodense filling defects suggestive of thrombosis.

Figure 2: Foreign body perforating lateral wall of oesophagus with air pocket formation on right side

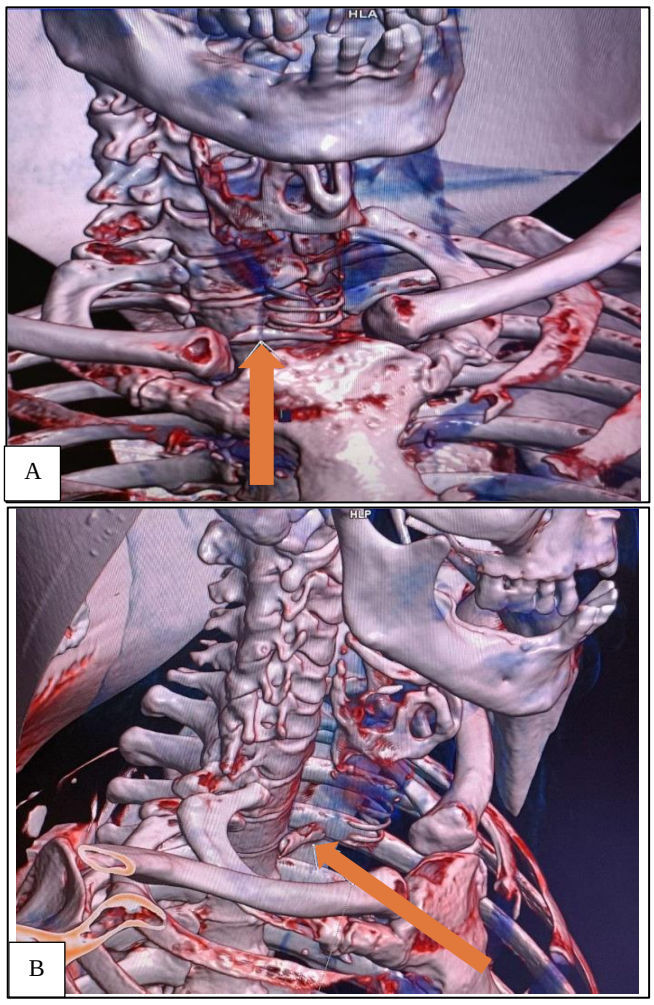

Figure 3 (A and B): Front view and lateral view of 3D constructed images of neck showing foreign body chicken bone at thoracic oesophagus impacted and perforating lateral wall of oesophagus.

Following the CT scan patient was asked about foreign body ingestion initially he denied on further questioning patient admitted accidental ingestion of chicken bone 5 days back.

Patient was taken for emergency procedure rigid oesophagoscopy with neck exploration under general anaesthesia. Foreign body was identified at thoracic oesophagus level which was retrieved and found to be bone piece measuring 2.5 cm following the removal of foreign body perforation of lateral wall of oesophagus was noted on either side at the site of impaction of foreign body with pulsatile pus draining from the site. No intervention was performed for perforation and pus was allowed to drain and decided to proceed with conservative management. Nasogastric tube was passed and secured along with that feeding jejunostomy was done by general surgeon. Patient was shifted to intensive care unit and close monitoring was done overnight. Patient vitals were within normal limits and was stabilised and shifted to ENT ward. He was kept nil per oral for one week and was on parenteral IV fluids. On postoperative day 7 feeds were started through feeding jejunostomy tube and patient tolerated well.

Figure 4: Foreign body chicken bone removed of 2.5 cm length.

On postoperative day 8 repeat CT neck was performed which showed perforation on lateral wall of oesophagus as mentioned in earlier scan in resolving state. The perforation measuring 3.5 mm on right and 4.5mm on left side with well-defined irregular peripherally enhancing collection with air pockets. On right side collection is noted approximately total volume 30cc tracking in superior direction in the right para-oesophageal space, deep cervical, posterior cervical space and perivertebral space in intermuscular plane which are intercommunicating. The collection is abutting brachiocephalic trunk, subclavian artery and carotid artery in lateral aspect and right thyroid lobe in medial aspect. Further tracking collection is noted to cross right carotid artery causing erosion of medial wall of right internal jugular vein causing complete thrombosis extending superiorly up to sigmoid sinus and inferiorly up to brachiocephalic vein causing near total luminal obstruction. On the left side collection total volume is approximately of 3 cc noted tracking from perforation site in lateral oesophageal wall with inferior extension along para-oesophageal space till level aortic arch. Patient was continued with IV antibiotics and albumin infusion was started. Feeds was continued to give through feeding jejunostomy and nasogastric feed was started on postoperative day 10.

Figure 5: Neck swelling on postoperative day 10.

Figure 6: Oesophageal perforation with bilateral peripheral enhancing collection with air pockets in CT scan on postoperative day 8.

On postoperative day 17 repeat CT scan neck and thorax was done which showed perforation on right lateral wall

of thoracic oesophagus at level of T2 vertebra communicating with peripheral enhancing collection with air pockets noted in lower third of neck extending anteromedially tracking along internal carotid artery and brachiocephalic trunk reaching up to level of upper border of manubrium measuring 2 cc and tracking posteriorly up to C3 vertebral body measuring 5 cc along with Internal jugular vein thrombosis. Another perforation on left lateral wall of oesophagus at T2 vertebra level forming blind ending tract reaching up to T4 level abutting medial wall of aortic arch in resolving state.

Joint consultation with ENT surgeon, cardiothoracic surgeon and gastroenterologist surgeon were taken and it was decided to manage him conservatively further for two weeks. He was started on orally with clear fluids on postoperative day on 19 and he tolerated well and was discharged with oral antibiotics and was advised to follow proper instructions. On review after 2 weeks, patient was asymptomatic, no any fresh complaints, neck swelling resolved tolerated oral feeds well. Hence, closure of feeding jejunostomy was done. Patient has been followed up for 3 months now he is asymptomatic and doing well.

Figure 7: Neck swelling resolved at the time of discharge.

DISCUSSION

Oesophageal foreign bodies are more commonly in paediatric age group of 6 months to 3 years and in adults belonging to high-risk categories like prisoners, alcoholics, edentulous and psychiatric patients. Our patient belongs to this high-risk category. In adults, 80% of foreign bodies pass spontaneously.[4,5] If the foreign body is too large to pass then it is often blocked due to stenosis caused by physiological or pathological stricture. Food bolus, bones and dental related foreign bodies are the most common types observed in adults. The types of foreign bodies may differ among different countries, regions and vary according to dietary habits, cultural features and sociocultural factors.[6-8] In western literature, case reports of ingested foreign bodies are predominantly food particles such as chicken and fish bones in India. Severity of symptoms depends upon size, type, site and period for which foreign body has been lodged. Endoscopic treatment or surgical intervention is needed in 20% and 1% of cases, respectively.[9-11] The patients with oesophageal foreign bodies present with complaints of dysphagia, odynophagia, diffuse chest pain, sensation of pressure in throat, laryngeal irritation, forceful coughing, gagging and airway obstruction.[11,12] Long standing foreign bodies in the oesophagus can lead to mucosal inflammation, ulceration and perforation with serious complications such as mediastinitis, deep neck abscess, pleural empyema, scarring and fistula formation.

Delayed and missed diagnosis is frequent because clinical presentation varies from asymptomatic patients and those with early nonspecific symptoms to those with severe symptoms. Radiological investigations like plain radiography and CT scan of neck can confirm and locate the position of foreign body at the same time it can help in diagnosing if any complications associated with foreign body. Emergency endoscopy with foreign body removal followed by assessment of impaction site in anticipation of complications is mandatory.

Surgical treatment of oesophageal perforation is more difficult due to surrounding inflammation. Conservative treatment should be tried to allow spontaneous closure and for the inflammation to subside at the impaction site with good antibiotics coverage. Conservative l management includes nasogastric tube insertion and total parenteral nutrition depending upon the condition of the patient along with anti-reflux and anti-inflammatory medications. Surgical intervention like feeding jejunostomy may be considered in few cases if planned for prolonged total parenteral nutrition.

In our case, surgical intervention like closure of oesophageal perforation for the following reasons: To wait for spontaneous closure, for the inflammation to subside at the site of foreign body impaction, surgical approach to close the perforation at the level of thoracic oesophagusis is difficult as it is associated with high risk and morbidity and deterioration of general condition of the patient is also to be considered.

In case of failed conservative management, direct surgical approach with closure of perforation should be considered. Regular follow-up along with serial radiological investigation like CT scan is mandatory to rule out delayed complications and also to know progression of the condition.

CONCLUSION

It is very important to elicit the history of accidental foreign body ingestion in patients with neck swelling. Besides clinical examination, radiological imaging modalities are very useful in confirming the diagnosis,

localising the site of impaction and then proceed with timely and appropriate management. Rigid oesophagoscopy is the gold standard technique of removing oesophageal foreign bodies. After removal of foreign body, meticulous endoscopic examination of impaction site is important. Early recognition of complications like ulceration, perforation, mediastinitis, deep neck abscess, pleural empyema, scarring and fistula formation and a multidisciplinary approach is necessary for successful outcome. Conservative management should be first choice of treatment for early management of small perforation. We followed a similar protocol and finally achieved a successful result.

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