

Case Report

Impacted foreign-body in the adult pharynx: report of a case and review of the literature

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Abstract: Foreign body ingestion is common to children and adults. Once the foreign body embedded in the soft tissues of the pharynx, it will cause diagnostic problems. A 52-year-old woman presented with mild pharyngalgia, pharyngeal paresthesia, and halitosis for 3 months. Laryngoscopy revealed a large non-ulcerated, red subepithelial mass arising from the left hypopharynx. Magnetic resonance imaging (MRI) scan was obtained, with and without contrast, and revealed a mass in the left hypopharynx with inhomogeneous enhancement. ¹⁸F¹⁸FDG PET/CT was performed and revealed increased uptake in the left hypopharynx. A pharyngeal foreign body, a plant stem, was found on the left side of the hypopharynx by a rigid laryngoscope, which was then removed successfully under general anesthesia. The symptoms of the patients were completely relieved and no complications were found at 23 months of follow-up postoperative. A completely embedded pharyngeal foreign body should be considered in cases of pharyngalgia, pharyngeal paresthesia and halitosis, although, the images are similar to malignant tumor.

Keywords: Foreign body, pharynx, diagnosis, surgery

Introduction

Ingestion of a foreign body is a common problem among all age groups and particularly in infants and children as they have a tendency to put anything in their mouth which may be ingested accidentally. These foreign bodies may get stuck in tonsil, base of tongue, piriform fossae, esophagus, and sometimes even in the larynx or the lower respiratory tract, leading to emergency situation, which maybe great challenge to otolaryngologists [1-3]. Most of foreign bodies in the pharynx usually get stuck at the level of cricopharynx or down in the right bronchus, and even in the lower lobe when the larynx is small [4, 5]. Occasionally the foreign bodies in the larynx maybe fatal [6]. The diagnosis is based on the history, clinical, and radiological examination. A vast variety of foreign bodies like coins, marbles, buttons, batteries, bottle tops, peas, beans, grains, and seeds in infants and children, and bones, dentures and metallic pins/wires have been reported more often in adults [7, 8]. In some instances (**Table 1**), they can go undetected, if the foreign body is embed-

ded in the base of the tongue or pharynx [4]. We here present a rare case with longstanding foreign body in the pharynx.

Case report

A 52-year-old woman presented with a history of mild pharyngalgia, pharyngeal paraesthesia and halitosis for three months. She was a non-smoker. These complaints had been first noticed three months earlier and had a gradual onset without fever. It was noted that she was diagnosed with upper respiratory tract infection or pharyngitis three times, but was ineffective with antibiotics. Repeated throat cultures were all negative. The tonsils were normal. Laryngoscopic examination revealed a large non-ulcerated, red subepithelial mass arising from the left hypopharynx (**Figure 1**). The epiglottis and the epiglottic vallecula were normal, and so was the vocal cord. Magnetic resonance imaging (MRI) was then performed subsequently showed a non-homogeneous soft tissue mass arising from the left hypopharynx (**Figure 2**), and enhanced MRI scan showed the

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Table 1. Foreign body of pharynx and their characteristics

Author	Age	Sex	Type of foreign-body	Site of the foreign-body
Sheikh S (1996)	1.5	F	Metallic clip	Hypopharynx
Kurul S (2002)	4	F	Metallic ring	Oropharynx
Sharma RC (2012)	20	F	Thief ant	Pyriform fossa
Sharma RC (2012)	25	M	Fish bone	Epiglottis
Kumar S (2013)	2	M	Metallic bolt	Nasopharynx
Kaur A (2013)	30	F	Tablet	Cricopharynx
Varadharajan K (2014)	2	M	Coin	Cricopharyngeus
Ziad T (2014)	21	N	Metallic	Retropharyngeal space
Macke RA (2015)	47	M	Plastic	Pyriform sinus
Wang QY (This study)	52	F	Plant stem	Hypopharynx

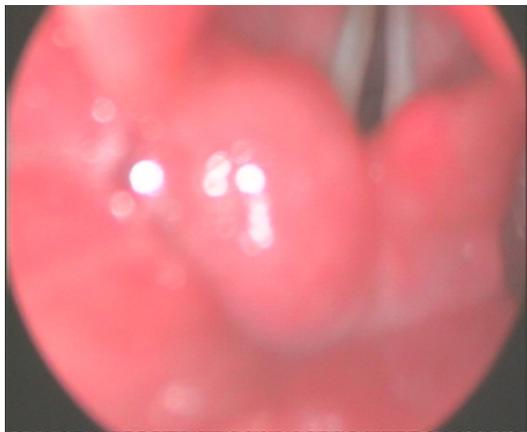


Figure 1. Laryngoscopy image showing mass of the left hypopharynx.

mass of the left hypopharynx with inhomogeneous enhancement (**Figure 3**). ^{18}F FDG PET/CT was performed for further evaluation. The maximum intensity projection images of the PET revealed increased uptake in the left hypopharynx (**Figure 4**). There was no evidence of enlarged cervical lymph node. Under general anesthesia, the pharyngeal foreign body, a plant stem, was seen on left lateral of the hypopharynx through rigid laryngoscope. The foreign body was then removed and the patient was discharged the next day after operation with an uneventful recovery.

The symptoms of the patients were completely relieved and no complications were found at 23 months of follow-up postoperative.

Discussion

Foreign body ingestion is a common complaint in clinic practice of otolaryngologist around the

world. Coins, pencil tips, and screws are usually found in children, however fish bone foreign body (FFB) is the most common food-associated foreign body in adults, especially in Asia, versus meat in Western countries [9, 10]. Visualization of the pharynx/hypopharynx by indirect laryngoscopic examination may reveal foreign body or only pooling of saliva in the pyriform fossae. However, in this case, the laryngoscope did not reveal

any foreign body and it only revealed a non-ulcerative red subcutaneous mass arising from the left hypopharynx. Pain while drinking (swallowing test) or the moving of trachea or larynx in a side-to-side motion (tracheal rock/laryngeal rub) suggested the presence of a foreign body [8, 11]. Early endoscopic removal of the foreign body is necessary if stuck in the cricopharyngeal sphincter or esophagus, and this procedure is usually carried out under general anesthesia. Hospital stay and morbidity can be decreased, only if treated as early as possible [12, 13].

Fish bones are often planted in the tonsils and their removal is easy, by means of a clamp, but a few become an impacted foreign body at various levels of pharyngeal soft tissues. The diagnosis of foreign body may be difficult, especially when the medical history is not clear, as the patient described here. Symptoms of pharyngeal foreign bodies usually include dysphagia, pain, stridor, excessive salivation, upper respiratory tract infection, and refusal to eat and drink. It is rare that none of these symptoms present in this case. The patient only complained of mildly pharyngalia, pharyngeal paresthesia, and halitosis, which were caused by stomatitis, pharyngitis, tonsillitis, dental caries, bad oral hygiene, sinusitis, foreign bodies in upper airway, continuous oral breathing, esophageal diverticules, gastric bezoar, or rarely bronchiectasy and lung abscess [13]. For the patient presented here, the rigid laryngoscope of the larynx showed the longstanding pharyngeal plant foreign body as the cause of pharyngalia, pharyngeal paresthesia and halitosis. Undiagnosed pharyngeal foreign bodies can result in retropharyngeal cellulitis or abscess.

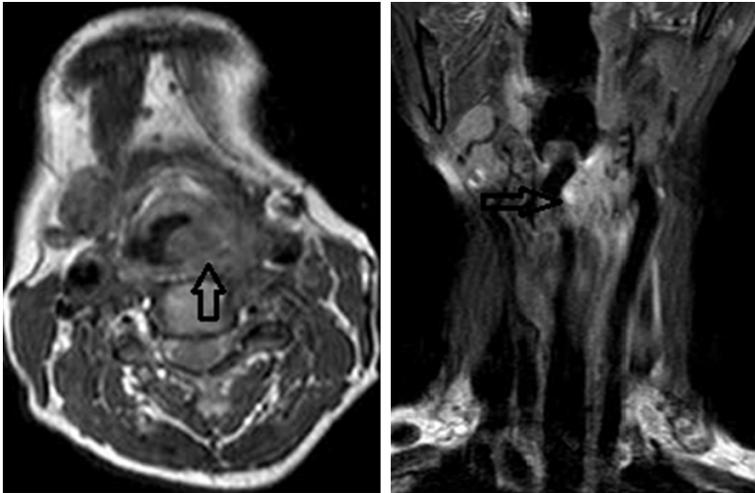


Figure 2. Magnetic resonance imaging (MRI) scan showed a non-homogeneous soft tissue mass arising from the left hypopharynx (as indicated by arrows).

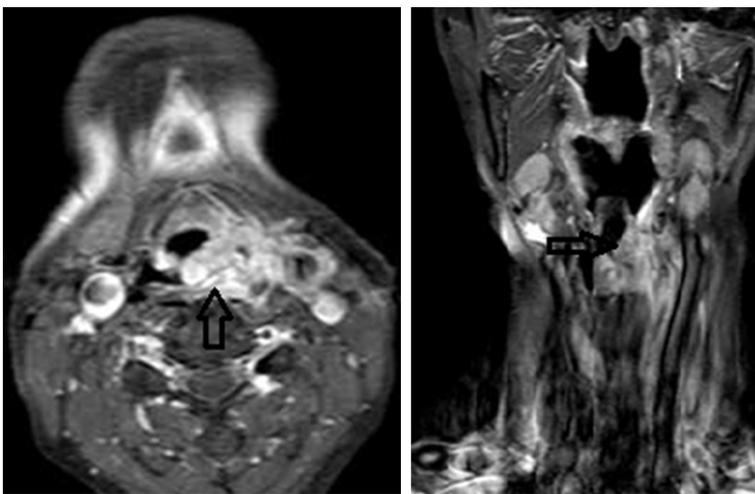


Figure 3. Magnetic resonance imaging (MRI) enhanced scan showed the mass of the left hypopharynx inhomogeneous enhancement (as indicated by arrows).

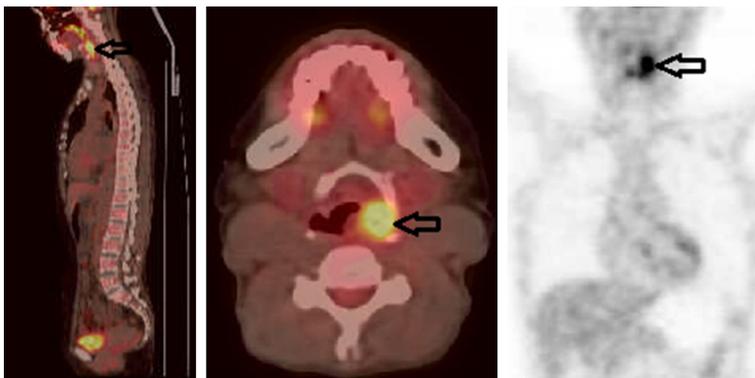


Figure 4. ^{18}F FDG PET/CT imaging scan revealed increased uptake in the left hypopharynx (as indicated by arrows).

The history provides a clue to the diagnosis. If the impacted foreign body is radiolucent, in the presence of positive history, symptoms or clinical suspicion, endoscopic examination is suggested [14]. The diagnosis of radio-opaque foreign body ingestion does not pose a major problem. However, in our case, the plant stem is non-radiolucent, so the MRI scan revealed a mass in the left hypopharynx with inhomogeneous enhancement. ^{18}F FDG PET/CT revealed increased uptake in the left hypopharynx. Careful selection of the most appropriate instrument and technique by well-trained medical or surgical endoscopists will result in safe and effective diagnosis and treatment. For the patient presented here, the longstanding foreign body could only be removed surgically, because it was completely embedded in pharyngeal soft tissues.

In conclusion, pharyngeal foreign bodies are common and favorable when the diagnosis and extraction are made on time. A completely embedded pharyngeal foreign body should be considered in cases presenting with pharyngalgia, pharyngeal paresthesia and halitosis, particularly when the history is unreliable or if the clinical symptoms are atypical, even though, the images are similar to a malignant tumor.

Disclosure of conflict of interest

None.

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