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Migrating Foreign Body in the Neck Penetrating the Neck Muscle

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Abstract: Ingested foreign body is one of the most common emergencies faced in otolaryngology practice. These foreign bodies are commonly seen in the upper aerodigestive tract and can be removed endoscopically. In rare cases, these foreign bodies can migrate from the aerodigestive tract extraluminally into the soft tissues of the neck and can cause serious life threatening complications. Immediate attention and prompt treatment is required in such cases. Here we report a rare case of ingested foreign body which was found lying in the soft tissue of the neck suggesting extraluminal migration which was removed successfully by neck exploration.
Keywords: Foreign body, Extraluminal migration, Soft tissue neck, C arm, Metal wire

INTRODUCTION

Ingested foreign body is one of the most common emergencies in ENT practice [1]. Ingested foreign bodies are commonly seen in pharynx and esophagus and are removed endoscopically without any complications [2].

In some cases, if the foreign body is sharp for example a metal wire or a sharp fish bone, it can perforate the upper digestive tract and migrate extraluminally into the soft tissues of the neck. These migrating foreign bodies can remain quiescent or can cause life threatening suppurative or vascular complications [3]. The diagnosis of these migrating foreign bodies is a challenge to the otolaryngologist and prompt treatment is required in such cases.

Here is a case of extraluminal migration of foreign body, a metal wire which was found embedded within the sternocleidomastoid muscle on the left side which was removed successfully by neck exploration with the help of C – arm.

CASE REPORT

A 27 years old female presented to our ENT department with foreign body sensation in the throat, throat pain and difficulty in swallowing following ingestion of food for two days. Her general systemic examination and vital parameters were normal. Routine clinical examination of ear, nose and throat were normal .Indirect laryngoscopy did not reveal any pooling of saliva , foreign body or mucosal erythema or edema. On examination no neck swelling was detected. Laryngeal crepitus was present, neck movements were free and painless. Patient was then evaluated with X ray soft tissue neck anteroposterior and lateral view which showed a foreign body of size 2 cm at the level of C5-C6 (Fig. 1).

Fig. 1: Foreign body on the day of admission

Following which patient was taken up for bronchoscopy and esophagoscopy. No foreign body was visualized intraluminally. Repeated X-ray neck showed foreign body at the same level. Subsequently upper GI scopy was done which showed superificial ulcer with congestion over the upper esophagus and fluoroscopy showed foreign body in the anterior wall of esophagus (Fig. 2).

Fig. 2: Fluoroscopy picture

Two days after the endoscopic evaluation, throat pain and difficulty in swallowing reduced but she started complaining of vague pain and foreign body sensation in the left side of the neck . On examination a pointed swelling of size less than one cm was noticed in the left side of the neck just lateral to the sternocleidomastoid muscle. With the persistence of foreign body on repeated radiographs associated with pain on the left side of the neck, we suspected extraluminal migration of foreign body.

An USG neck and repeat fluoroscopy showed the foreign body had migrated in vertical direction lying close to the internal carotid artery posterior to the sternocleidomastoid muscle on the left side of the neck (Fig. 3).

Fig. 3: USG neck picture

She was taken up for left side neck exploration, intraoperatively multiple needles were placed in the skin of neck on the left side (Fig. 4).

Fig. 4: Needles placed in the skin to locate the foreign body

With the guidance of C – arm, radiographic pictures were taken to locate the foreign body. The foreign body was found piercing the left sternocleidomastoid muscle (Fig. 5 and 6). The foreign body was found to be metal wire and was removed in toto. Postoperative period was uneventful.

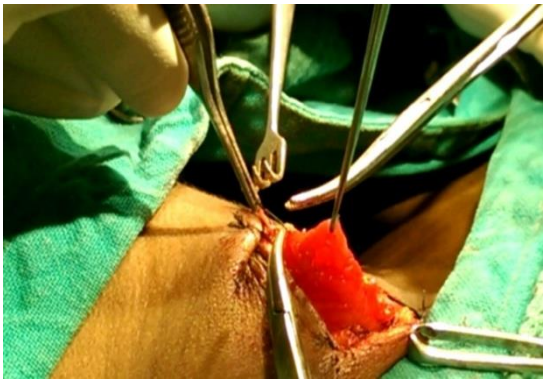

Fig. 5: Metal wire piercing the neck muscle

Fig. 6: Metal wire after removal

DISCUSSION

Ingested foreign bodies most commonly pass through the gastrointestinal tract uneventfully [4]. In some cases, it can get impacted in the tonsils or at the base of the tongue or the valleculla and can be easily removed without any complications. The incidence of foreign body getting lodged at the cricopharynx or at any one of the other constrictions of the esophagus is 5

% and it can be removed endoscopically under general anaesthesia [5]. Very rarely, an ingested foreign body can penetrate through the gastrointestinal tract and can become lodged in the soft tissues of the neck. The possible mechanisms for penetration include a combination of oesophageal persistalsis and neck movements [6]. Migrating foreign bodies is the term used for such cases. These migrating exraluminal foreign bodies need immediate evaluation and prompt treatment as it may lead to several life threatening complications [7]. The complications include rupture of large vessels such as aorta or internal jugular vein [8] or it may penetrate the carotid sheath [9]. The migrating foreign body getting embedded in the thyroid gland had been reported in literature [10]. It can also lead to suppurative complications like deep neck abcess [11]. A retrospective study conducted on 24 migrated foreign bodies in the neck by Chee and Sethi [12] showed that all the 24 migrated foreign bodies were sharp and linear. Another study conducted by Remsen *et al*. [13], reports a series of 321 penetrating foreign bodies out of which only 43 were found extraluminally. They found that sharper the foreign body higher is the rate of penetration.

CT scan neck helps in localizing such foreign bodies and provides a roadmap for surgical intervention. Many studies on migrated foreign bodies have suggested the use of CT scan to localize the migrating foreign body but CT scans are not without their drawbacks. The relation of the soft tissues of the neck with respect to the bony and cartilaginous structures differs with head and neck movements. The position of the head and neck at the time of surgery may vary from that when CT was done. So, the foreign body at surgery may not be located exactly as it were in the CT [9]. The present case did not require CT as the foreign body was lying very superficial and was at the verge of extrusion. So, we recommend the use of C – arm to localize the foreign body intraoperatively [14].

CONCLUSION

Extraluminal migrating foreign bodies are uncommon occurrences. Having confirmed the foreign body is extraluminal, exploration and removal via external approach at the earliest is recommended to avoid life threatening complications.

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