Acta Scientific Otolaryngology

Volume 2 Issue 12 December 2020

Case Report

A Wandering Fish Bone: A Case Report

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Received: September 24, 2020

Published: November 30, 2020

Abstract

Reports of extraluminal migration of foreign bodies from the upper aerodigestive tract are rare. We report an unusual case of a 70 year old lady who swallowed a 2.5 cm linear sharp fish bone which migrated from pharynx to the soft tissue neck via thyroid tissue. This foreign body was easily extracted under local anaesthesia through an incision over the skin. We conclude that careful assessment of patient with foreign body in the throat is crucial to avoid fatal complications.

Keywords: Extraluminal; Foreign Body; Thyroid; Computed Tomography

Abbreviation

CT: Computed Tomography

Introduction

Foreign body ingestion is a common complaint encountered by otolaryngologists. It occurs both in children and in adults. Children commonly ingest coins and toys. The most common foreign bodies accidentally ingested by adults are bones especially fish bones. Complications due to foreign body ingestion are rare although if present can cause significant morbidity and in some cases mortality. The symptoms may vary from none to foreign body sensation, odynophagia, dysphagia, drooling, chest pain, neck pain, or even sensation of choking [1]. These variations depend on the nature of the object, the anatomic location, and the period of time left since ingestion. Advances in radiological techniques and the endoscopic management of foreign bodies have greatly improved the outcome of such cases, hence impending complications of foreign body ingestion have reduced over a period of years. However, migrating foreign bodies may make it difficult to diagnose especially after noting the absence of foreign body on endoscopy. X-ray can be misleading in cases where the cartilages of upper airway are calcified. CT is considered to be the study of choice in such cases. We report the rare case of a foreign body (fish bone) that migrated from pharynx to the soft tissue of neck via thyroid tissue.

Case Report

A 70 year old female presented in OPD with odynophagia and swelling in neck for 2 days with accidental ingestion of a fish bone 7 days back. Her symptoms had aggravated for last 2 days for which she wished to seek medical advice. On Examination her general condition was satisfactory, vitals were stable. Systemic Examination was normal. Neck examination revealed a 1.5 x 1.5 x 1.0 cm firm, tender swelling over left side of neck at the level of thyroid cartilage about 3 cm away from the midline. There was a punctuate lesion at the apex of swelling without any signs of inflammation. No abnormal findings were found in any other Head and Neck Examination. Indirect Laryngoscopy did not reveal any pooling of saliva, foreign body, odema or any congestion. Laryngeal inlet was normal.

Patient was investigated. Routine investigations were normal. Plain neck radiography revealed no evidence of fish bone. Plain CT Neck revealed a linear foreign body 25 x 1.8 mm in dimensions, lying in extraluminal oblique plane embedded in thyroid tissue partially on left side at the level of T1 suggestive of migrated foreign body fish bone.

The punctuate lesion was explored under local anaesthesia via 2 cm horizontal incision. The foreign body was discovered in the neck partially embedded in thyroid tissue. It was retrieved and was found to be a 2.5 cm long sharp, linear fish bone. The post-operative period was uneventful.

Discussion

Foreign bodies may get lodged in the tonsil, base of the tongue, pyriform fossa, and cervical esophagus. Only rarely do foreign bodies penetrate the wall of the aerodigestive tract and even more rarely do they migrate into the soft tissue and viscera of neck [2,3]. The largest study till date carried out by Remson., *et al*. in 1983 reported that out of 321 cases of penetrating esophageal foreign bodies, 43 of them migrated extraluminal [4]. Foreign bodies which are sharper and more horizontally oriented have a higher chance of penetrating the wall of the aerodigestive tract. Perforation occurs due to strong contraction of the hypopharyngeal and cricoesophageal muscles as they propel a food bolus into the esophagus. This explains why higher rates of penetration occur in the cricopharynx and cervical esophagus. The mechanism of migration is thought to be due to movement of neck muscles and viscera during voluntary or involuntary movements of the head and neck structures. In our case, this could have been the cause of migration as a horizontally or obliquely placed fish bone could easily perforate the cricopharnyx. A foreign body might also penetrate adjacent visceral structures, such as the thyroid gland [5] and the major blood vessels in the neck and precipitate vascular complications, such as aortoesophageal and innominate-esophageal fistulae and carotid rupture. X-rays of lateral neck though useful, do not help to determine if migration has occurred. Foreign body migration is suspected on the basis of suggestive history, a positive or negative finding on lateral neck radiography, and a negative finding on rigid endoscopy. A CT scan can then be used to localize the foreign body and estimate the extent of damage done. A CT scan of the neck, utilizing extra fine cuts of 1 mm is the investigation of choice and is invaluable in confirming the presence of the foreign body. It offers better detection of thin, small and minimally calcified foreign bodies which is difficult to identify on plain X-ray [6]. It also serves as a 'road map' as it provides the surgeon with accurate size, type, orientation of foreign body and its relationship to other vital structures in the neck [7,8]. This information is very crucial especially when a neck exploration is planned. Having confirmed that the foreign body is extraluminal, exploration and removal of the foreign body via an external approach is recommended, to avoid life-threatening complications.

Conclusion

The inability to identify an ingested foreign body on clinical examination and endoscopy does not rule out its absence. The persistence of symptoms and the onset of ominous signs must direct the otolaryngologist to the possibility of a migrating foreign body. Such cases could be easily mismanaged, wherein the physician might assume that the foreign body has passed to the stomach and therefore treat the patient conservatively, which could prove fatal. A high index of suspicion is necessary to rule out an overlooked foreign body. We report this case because of unusual migration of fish bone from aero-digestive tract upto the subcutaneous tissue and skin via thyroid tissue with CT scan providing as a road map for the necessary surgical intervention.

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