Case Report

Fish bone Ingestion: A Case Report of a Unique Route of Extraction

Navid Nourizadeh MD[1], Shirin Irani MD-MPH•[1], Amirhossein Soroori MD[1]

Abstract

Foreign body ingestion is a common problem in otolaryngology. In this case report, we present a patient with fish bone ingestion with a unique route of extraction. A 50-year-old woman was presented with a complaint of odynophagia while eating fish. Rigid laryngoscopy revealed nothing except ecchymosis on the right pyriform sinus. We performed an axial neck computed tomography (CT) scan and found the fish bone at the retropharyngeal space. After three days there was a tender bulging in the neck. We extracted the fish bone thorough a small incision on the neck. We recommend the performance of CT scan in patients with suspected hypopharyngeal and esophageal sharp foreign body impaction.

Keywords: CT scan, esophagus, fish bone, hypopharynx, sharp foreign body

Cite this article as: Nourizadeh N, Irani S, Soroori A. Fish bone ingestion: A case report of a unique route of extraction. *Arch Iran Med*. 2013; **16(9):** 555 – 556.

Introduction

Foreign body ingestion is a common problem presenting to otolaryngologist. Esophageal foreign bodies usually present acutely, especially in adults who have frequently an obvious history. 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.

The risk of complications also varies. Generally, about 1 % of esophageal foreign bodies lead to perforation of gastrointestinal tract.[1] The type of foreign bodies also differs due to food habits. In East Asia fish bone ingestion is common, while in Iran it has a lower frequency. Common sites of impaction for fish bone are palatine tonsils, base of tongue, vallecula, and pyriform sinus.[2] Fish bones have a tendency of migration and there are reports of esophageal perforation, aortoesophageal fistulas, or even cardiac tamponade in the literature.[3,4]

In this case report, we present a patient with fish bone ingestion and a unique route of extraction. This report was approved by the Institutional Review Board of Mashhad University of Medical Sciences.

Case Report

A fifty-year-old woman was admitted to the Otolaryngology Department of Imam Reza Hospital, Mashhad University of Medical Sciences, with a complaint of odynophagia while eating fish on the previous day. The odynophagia persisted for a day till persuade the patient to seek medical attention. She had no past medical history of dysphagia, previous esophageal or gastric surgery, diabetes mellitus, or other diseases. Her drug history was also unremarkable. On physical examination, her vital signs were stable with a respiratory rate, heart rate, and blood pressure of 14/min, 80/min , and 120/75 mmHg, respectively. The oxygen saturation level was 98 % and the oral temperature was 36.7 ºC. The oropharyngeal examination revealed no abnormal finding. On indirect laryngoscopic examination, the vallecula, larynx, and pyriform sinuses appeared normal without pooling of saliva. Examination of the neck was also unremarkable. Due to her persistent odynophagia, we conducted a lateral neck X-ray in the hyperextention position. It revealed an opaque foreign body most compatible with a fish bone, lodged in the cervical esophagus adjacent to C6 cervical bone. The chest X-ray was normal. She underwent a rigid laryngoscopy and esophagoscopy under general anesthesia. The examination revealed nothing except the evidence of ulceration and ecchymosis on the right pyriform sinus. Her complaints regressed post-operatively, but still persisted. We performed an axial neck CT scan and found the fish bone at the retropharyngeal space, behind the right carotid sheath (Figure 1). The odynophagia disappeared completely and she complained of a vague neck pain. We observed the patient for 48 hours. She refused a second operation transcervically for foreign body extraction and discharged with informed consent. After three days, she returned with an erythematous and tender bulging at the mid neck which represented the fish bone on palpation. We prepped and draped the area and instilled the local anesthesia. Through a small incision on the maximum bulging of the neck, the fish bone was appeared (Figure 2). It was not attached to any adjacent structure and was pulled out cautiously. We observed the patient for 24 hours and discharged without any problem.

Discussion

Among gastrointestinal foreign bodies, 80 % – 90 % pass spontaneously.[1] Among those, less than 1 % needs operative intervention. Ingestion of fish bone, although often innocent,

Authors' affiliations: [1]Ear, Nose, Throat, Head, and Neck Surgery and Related Sciences Research Center, Imam Reza Hospital, Faculty of Medicine, Mashhad University of Medical Sciences, Mashhad, Iran.
•**Corresponding author and reprints:** Shirin Irani MD-MPH, Ear, Nose, Throat, Head, and Neck Surgery and Related Sciences Research Center, First Floor, Quaem Hospital, Ahmadabad Avenue, Mashhad, Iran.
Telfax: +985118012689, E-mail: sh_irani@razi.tums.ac.ir, shirinirani62@yahoo.com.
Accepted for publication: 28 May 2013

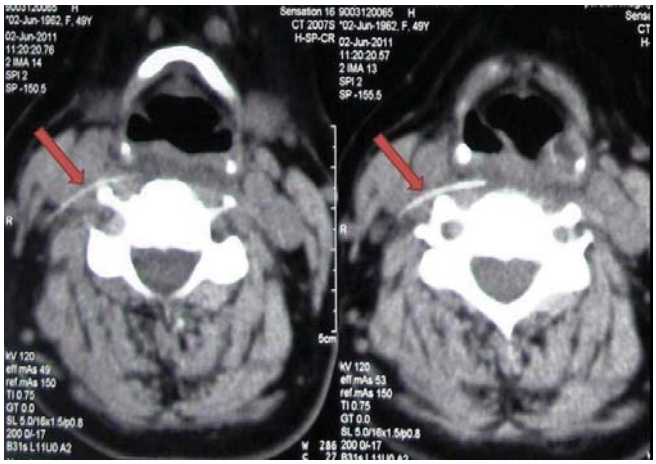

Figure 1. The fish bone is seen at the retropharyngeal space on axial neck CT scan.

Figure 2. The foreign body extracted through a small incision on the maximum bulging site of the neck.

may cause mucosal ulceration and inflammation. It could lead to esophageal perforation and make catastrophic consequences such as deep neck infection, mediastinitis, or even aortoesophageal fistula.

Alam, et al. have reported a fish bone perforating the esophageal wall, migrating from the superior aspect of the aortic arch to the anterolateral aspect of it after penetrating the aortic lumen.[5] Kelly, et al. have also reported an aortoesophageal fistula due to fish bone which was managed successfully.[3] Sharland, et al. have reported a 32-year-old woman with fish bone ingestion which perforated the esophagus and pericardium and caused cardiac tamponade.[4] Also, Chen, et al. reported a 75-year-old man with intra-abdominal abscess due to intestinal perforation of ingested fish bone.[6] Other reports consist of migration to the thyroid after esophageal perforation[7] and migration to the liver.

Certain studies have demonstrated the usefulness of CT scan for detection of fish bone as an esophageal foreign body. According to the Akazawa, et al.'s report of 76 cases, the sensitivity and specificity of CT scan were 100 %.[2] Eliashar, et al. reported a sensitivity of 96.7 % and specificity of 100 % in 30 patients with suspected fish bone ingestion.[8] In contrast, the X-ray has a poor sensitivity of 54.8 % and specificity of 100 %.[2] The advantages of CT scan consist of detection of the fish bone and its accurate location and the relation with adjacent structures.[2]

Based on our case report, we recommend the CT scan imaging in patients with suspected esophageal sharp foreign body impaction. CT scan not only helps in diagnosis and detection of probable complications, it can also help in selecting the best therapeutic strategy.

Conflict of Interest: *None.*

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