

Migrating Fish Bone Complicating a Deep Neck Abscess

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Deep neck infections are not uncommon; however, a migrating fish bone is seldom a cause of a deep neck abscess. Fish bones are a sharp foreign body and can penetrate the oropharynx or esophagus. However, this rarely occurs. We report a case of deep neck abscess resulting from the intracorporeal migration of a fish bone. Initial radiography and esophagoscopy of the neck were both negative; migration of the bone was ultimately documented by computed tomography. Surgical exploration was performed via a lateral neck incision, and the fish bone was successfully retrieved. Although fish bones are a rare etiology of deep neck abscesses, should be kept in mind when a patient has the history of fish bone ingestion. (*Chang Gung Med J* 2005;28:872-5)

Key words: fish bone, migratory, deep neck infection, abscess.

Accidental ingestion of a fish bone is usually annoying, and, in some cases, it may be dangerous to a patient, but a diagnosis can also be problematic for the doctor. Although otolaryngologists seldom encounter much difficulty in removing these objects, the infrequent complications of a retained fish bone, including deep neck abscess, mediastinitis, lung abscess, an esophageal carotid-artery fistula, and a perforated bowel, are potentially disastrous, all of which can increase morbidity and occasionally even cause mortality.⁽¹⁾ Rarely, the fish bone may penetrate extraluminally and reside in the soft tissue of the neck. Computed tomography (CT) of the neck is of great assistance in diagnosing a migrating fish bone. Surgical exploration is mandatory in such situations.

CASE REPORT

A 60-year-old female patient accidentally ingested a fish bone in August 2003. She experienced the sensation of foreign-body lodgment, with a stabbing pain in her throat. Instead of stopping eating, she attempted to dislodge the fish bone by swallowing large quantities of food. Because the lump-in-

the-throat sensation and sharp odynophagia persisted, she rushed to our Emergency Department. A thorough oral examination failed to reveal the fish bone, so flexible fiberoptic endoscopy was performed. Results indicated that the tongue base, vallecula, epiglottitis, posterior pharyngeal wall, larynx, and vocal cords all appeared normal. Then plain neck radiography was arranged; however, there was still no evidence of the fish bone. The source of the pain was localized at a point about 1.5 cm below the thyroid notch and 1 cm lateral to the midline of the neck. Based on the level of the sensation of intrusion and the associated pain, esophageal impaction of a fish bone was suspected. Therefore, flexible panendoscopy was arranged for further investigation of the esophagus. Despite the fact that erosion on the esophagus was detected 14 cm from the central incisor, we were still unable to locate the fish bone. The patient was sent home with some oral medication. Three days later the patient did not return to the outpatient department as scheduled. Ten days later, however, as the odynophagia had become aggravated, the patient visited the outpatient department again. Upon presentation, mild swelling of the left neck with one area of localized tenderness halfway

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between the thyroid notch and clavicle was diagnosed. Flexible fiberoptic laryngoscopy was conducted again to reevaluate the upper aerodigestive tract, but the fish bone was still not detected. Under the impression of a suspected migrating fish bone and deep neck infection, the patient was admitted to the ward, and then head and neck computed tomography (CT) was performed. The axial CT scan revealed that a deep neck abscess had formed in the left anterior cervical space, with a small fish bone evident inside the abscess cavity (Fig. 1). The complete blood count (CBC) and biochemical tests were all within normal ranges. The patient underwent transcervical surgical exploration of the left neck. A swollen mass was found over the anterior cervical neck below the platysma muscle. After incision of the cavity, a whitish, serrated fish bone, 2.4 cm in length (Fig. 2), was found only 5 mm internal to the jugular vein, and it was promptly extracted. Rigid esophagoscopy was also performed, with no significant erosion of the mucosa of the esophagus noted. Pus culture revealed 2 pathogens, *Klebsiella pneumoniae* and *Bacteroides vulgatus*. Appropriate antibiotics were administered according to the drug sensitivity test. The postoperative period was uneventful.

DISCUSSION

Accidental ingestion of fish bones is quite common. When intrusions occur, the fish bones typically

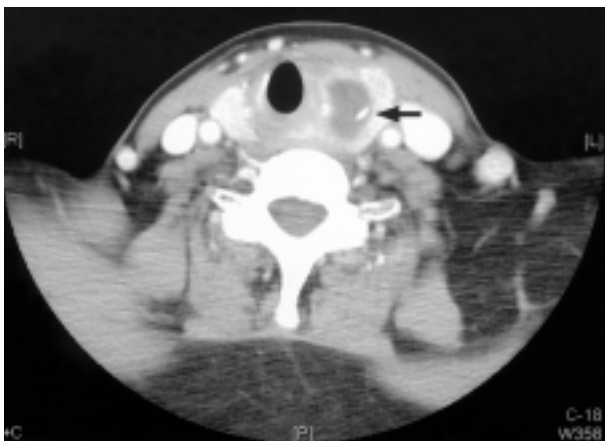


Fig. 1 Axial computed tomographic scan showing the migrated fish bone (arrow) in an anterior cervical deep neck abscess.

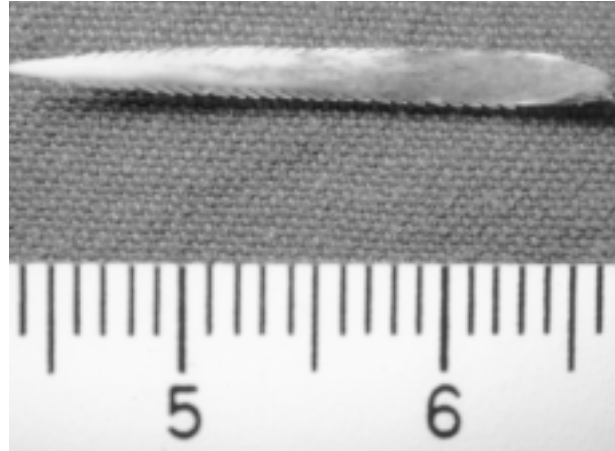


Fig. 2 Sharp, linear, serrated fish bone, 2.4 cm in length.

lodge in the tonsils or the base of the tongue.^(2,3) Other sites of impaction include the vallecula, pyriform fossa, epiglottis, cricopharyngeus, and esophagus.⁽³⁾ A fish bone is sometimes not evident on plain radiographs because of its radiopacity. A plain radiograph is usually arranged to confirm the diagnosis of an ingested fish bone, however, the clinical utility is questionable. Leu et al. reported a sensitivity and specificity of 39% and 72%, respectively, for their plain radiographs.⁽¹⁾ Fish bones may be radiolucent or radiopaque, however, and sometimes even the latter variants are of insufficient radiosensitivity to be clearly visible on a radiograph. If the radiograph provides definite evidence of a fish bone, rigid esophagoscopy under general anesthesia may be arranged for further evaluation. Migration is assumed to have occurred when the foreign body is documented radiographically with negative endoscopy.^(2,4)

A migrated foreign body can occur in any adult age group, and the possibility should always be borne in mind when throat discomfort symptoms are persistent and there is history of swallowing difficulties involving fish bones. It has been demonstrated that the use of chopsticks and an edentulous status are predisposing factors.⁽²⁾ A thorough oral examination, flexible fiberoptic endoscopy, and neck radiography are essential for an initial diagnosis of fish bone impaction in the upper aerodigestive tract. A CT scan is another useful tool for locating the intruding object, obviating unnecessary general anesthesia with rigid esophagoscopy. Relatively speaking, a CT scan is superior to a plain radiograph in terms of its

ability to discriminate ingested fish bones.^(1,2,4-6) A CT scan can reveal not only the size, type, location, and orientation of the foreign body, but also its relationship to other vital structures of the neck. In the present case, for example, both the plain neck radiograph and esophagoscopy were negative, but the patient still experienced odynophagia and neck pain. A migrating fish bone should be suspected in such a symptomatic patient. A CT scan is indicated in such situations even when both of the other investigative modalities are negative. The cost-effectiveness of using CT to screen patients with possible fish bone ingestion is still a controversial issue. However, CT is of great help in selected patients with persistent symptoms, as in the present case.

Exploration for a migrated foreign body has been described by some otolaryngologists to be like fishing for a needle in the ocean. Given the potentially hazardous consequences and the therapeutic dilemma presented by this type of medical situation, a meticulous surgical technique and experienced supporting personnel are critical to a successful outcome. Unbelievably, the fish bone may simply disappear.⁽⁷⁾

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轉移性魚骨引發深頸部化膿感染

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深頸部感染臨床上並不少見，然而因為誤吞魚骨後進一步成為轉移性魚骨引發深頸部化膿感染的病例卻相當少見。魚骨為一尖銳性異物，不慎誤吞後有可能會刺穿口咽或是食道轉移進入頸部或是縱隔腔中，但鮮少發生。本文報告一位病患深頸部感染，起因於魚骨誤吞後穿刺轉移進入頸部之中。初步頸部 X 光片及食道人視鏡檢查皆未發現魚骨，最後藉由電腦斷層掃描才確定診斷轉移性魚骨之存在。病患接受頸部切開引流手術，魚骨也順利取出。雖然轉移性魚骨為深頸部感染化膿的少見原因，當病患有誤吞魚骨之病史時，此項病因仍需謹記於心列入鑑別診斷，不可輕忽。(長庚醫誌 2005;28:872-5)

關鍵字：魚骨，轉移性，深頸部感染，化膿。

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