

# Impacted Fish Bone In Throat: Tips To Share

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## I. Introduction

Swallowed fish bones are a common ENT emergency we come across at the outpatient department of otorhinolaryngology. Persistent sharp pain in the throat following eating fish is felt by the patient to indicate that a fish bone has stuck in. Accidental ingestion of fish bone and its impaction in the pharynx is very common among the fish-eating communities in rural areas of the southern part of telangana, India, where rivers, ponds, and lakes are found.

The common fresh water fish consumed in this belt are catla, rohu, pomfret, Bengal carp, and Snakehead murrel. Fish bones are poorly radio-opaque bones and are therefore less likely to be seen on X-rays. The best way to confirm diagnosis is with the help of a 70-degree rigid telescope, a fiber-optic laryngopharyngoscope, or a computerized tomography (CT) scan of the neck. A CT scan is a three-dimensional form of imaging, which can be more accurate in detection if suspicion is high and no bone is found on endoscopy. CT is currently the standard imaging modality of choice in cases of suspected foreign bodies. During the act of chewing and swallowing the base of the tongue pushes a bolus of food posteriorly, and any sharp object hidden in that bolus may become embedded in the tonsil, the tonsillar pillar, the tongue base, and the pharyngeal wall. The availability of rod-lens telescopes, video-endoscopy, varieties of forceps, and safer anesthesia facilities has facilitated the removal of fish bones in the throat, a safe and simple procedure. If fish bone is not removed timely, it may lead to significant complications like deep neck infection.

This study analyzes the ingestion of fish bones in our region and determines a simple, safe, and easy method to remove fish bones from the throat at our hospital.

## II. Methods And Materials

54 Patients attending ENT opd presenting with a sharp pain in their throat following (24 hrs) recent ingestion of fish during the period Jan 2020 – Nov 2024 were examined and included in study. All underwent direct examination of the oral cavity, oropharynx and hypopharynx using 70rigidscope. A soft tissue lateral X-ray of the neck was performed in the remaining patients on whom FB was not seen. The neck was examined for tenderness, masses and surgical emphysema. . If a fish bone was seen on examination it was removed without any anesthesia, If a bone was not seen on endoscopy and seen on X-ray or CT scan then the patient was referred for removal under GA. Patients with negative clinical examination, i.e. no bones or negative X-rays were reassured and asked to attend the ENT department AFTER TWO days. If their symptoms persisted patient was subjected for flexible upper GI endoscopy.

## III. Results

The locations of the impacted fish bones in our study include tonsil (38) (fig A), base of tongue (09)(fig B), vallecula (3), lateral pharyngeal wall (3), and upper end esophagus (1). More common in age group 21-30yrs (Table 1), Except for one case, in all cases we could remove FB using the four-hand technique and a 70-degree endoscope with a camera attached to the monitor. One case presented to us with surgical emphysema of the neck; on endoscopy, laryngeal edema was seen; no FB was found; the patient was subjected to a CT scan and on CT, FB was seen impacted in the upper end esophagus (fig C) . Ours being a primary care center patient was referred to a tertiary care center.

A variety of endoscopic techniques and instruments are indicated for the removal of fish bones in different situations and sites. How we do it is: A 70-degree rigid endoscope with the camera, monitor, and light source being used in all cases. Patient in sitting position with neck extended tongue protrude out. The assistant may cover the tongue with gauze and hold it to prevent it from blocking the view of the oropharynx, and on the

other hand he supports the head from behind. The surgeon holds the endoscope and camera with the left hand, and with the right hand he holds forceps and removes foreign body. Care is taken not to touch any oral cavity structure thus eliminate gag reflex (fig D). Various forceps that are useful in the removal of foreign bodies are Birkett Tonsil Artery Forceps, mosquito Artery Forceps, Right Angle Thyroid Artery Forceps, and Hartman Ear Dressing Forceps. Usually we don't prefer any anesthesia or any numbness-causing drugs or sprays. Except for one case where FB was located in the upper end esophagus, in all cases, using an endoscope, we could retrieve FB.

**Table 1 showing fish bone by site and age group.**

Site	1-10 years	11-20 years	21-30 years	31-40 years	41-50 years	Above 50 years	Total
Tonsil	2	6	17	10	2	1	38 (70.3%)
Tongue base		2	6	1	0		9 (16.6%)
Vallecula			2	1	0	0	3 (5.5%)
Lateral pharyngeal wall			2	1			3 (5.5%)
Oesophagus						1	1 (1.8%)
Total	2(3.7%)	8(14.8%)	27(50.0%)	13(24.07%)	2(3.7%)	2(3.7%)	54 (100%)

#### IV. Discussion

Careful examination of the oral cavity and oropharynx is needed whenever there is a history of ingestion of FB, as saliva strands often obscure or mimic fish bones.

The commonest site for a fish bone to impact is the base of the tonsil (70.3%), followed by the base of the tongue (16.6%) and the vallecula (5.55%). These sites are readily seen on examination, including examination with an indirect laryngeal mirror. Fishbone is poorly radio-opaque bones. In the present-day scenario A lateral neck X-ray is rarely of any help; indirect X-ray findings include prevertebral widening, soft tissue swelling in excess of the diameter of the adjacent vertebral body, and soft tissue gas or air in the upper esophagus. The sensitivity and specificity rates for foreign body identification are high in CT scans; that is why it is the investigation of choice in suspected cases where no bone was found on endoscopy.

The local fish availability (freshwater, seawater), the method of cooking, and the eating habits are some of the factors that affect the impacted foreign body fish bones. Freshwater fish often have more bones and more chance of impaction than marine ones. Freshwater fish have evolved in varied environments with different challenges compared to saltwater fish. The skeletal structure of fish is influenced by their habitat and the ecological location they occupy. Freshwater environments can vary significantly in terms of temperature, flow, and habitat structure, which may lead to a greater diversity of body shapes and sizes, resulting in more bones. Most patients can recall and identify the type of fish they ate; the stewed method of cooking is considered to be a risk factor for impaction. Linear bones are more likely to be impacted in the oropharynx and flat bones (fish head bones) in the upper esophagus.

Before visiting the hospital, all patients in our study tried a variety of Home remedies in the hopes that the bone would come loose. The prevalent idea is that fish bones are so tiny that they pass through the digestive system without any issues; thus, patients experiment with items like eating a big banana and letting it sit in their mouths for one to two minutes and swallowing it without chewing, which may cause the fish bone to fall out. Simply swallow a medium-sized ball of cooked rice; the weight may force the bone to loosen.

We had an unpleasant experience with two cases. After applying 10% lignocaine spray to the oropharynx to numb the area, the patient was inspected after three minutes. No foreign bodies were found. Most impacted fish bones can be removed easily without any complications. Sometimes the apathetic attitude of clinicians, awaiting spontaneous expulsion by the patient, Neglected and delayed presentation cases have difficulties. We had one case in our study where sixty-year-old women presented to us with neglected impacted fish bone three days old. On examination: neck was swollen, edema oropharynx and hypo pharynx noted surgical emphysema found, random blood sugar found be around 380 mg/dl, CT scan done, bone found in upper esophagus patient was refer to higher tertiary care center but failed to survive.

Few publications in the literature are: sometimes they become embedded in the pharyngeal wall and neck soft tissue and cannot be located even by fiber optic endoscopy or rigid esophagoscopy. Left in place, the foreign bodies can cause serious complications [1]. A small percentage of fish bones may penetrate the

alimentary tube wall and will be found either intraluminal or extra luminal [2]. Another case of thyroid abscess was reported [3] in a 50-year-old female who had fever and a painful mass in the anterior neck. An intra-thyroidal abscess was diagnosed, and a foreign body that proved to be a fish bone was removed, reported in the literature.

## V. Conclusion

Impacted Fish bone impaction is commonly encountered clinical problem in the fish-eating communities of rural areas . Early diagnosis and immediate removal of fish bone is the appropriate treatment which is smoothly done by 70 degree endoscope. Endoscopic Four hand technique is simple, safe, easy and well tolerated procedure for foreign body removal lodged in oropharynx.

## Statement of Ethics

The patients approved the publication of this report.

## Conflict of Interest Statement

The authors have no conflicts of interest to disclose.

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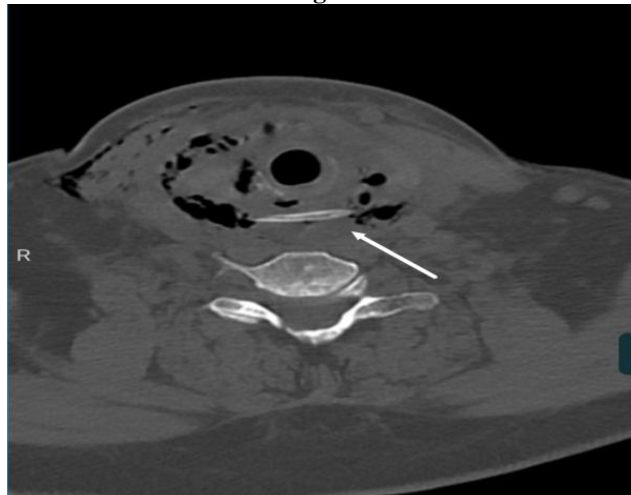
**Fig A**



**Fig B**



**Fig C**



**Fig D**

