

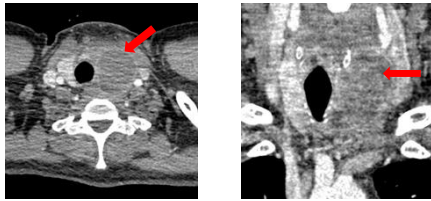
# THE ROLE OF ULTRASOUND IN A RADIOLUCENT INGESTED FISH BONE A CASE REPORT

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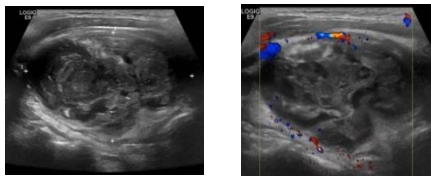
## BACKGROUND

A 56 year old man presented to A&E 2 weeks after the ingestion of a fish bone with throat pain, swelling and systemically unwell. Patient was pyrexial and septic on admission, with elevated inflammatory markers. He underwent a CT neck and chest which did not demonstrate any radiopaque foreign body but did show an infrahyoid collection, inseparable from the left thyroid lobe. An US performed at the time also did not demonstrate a foreign body but showed a large organised collection within the thyroid, and suppurative thyroiditis was confirmed on cytology.

### IMAGING ON ADMISSION



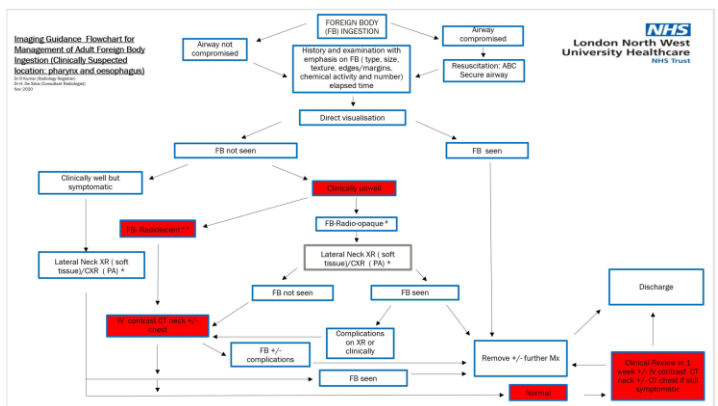
CT neck/chest with contrast: Large Left infrahyoid collection inseparable from left thyroid lobe. ? Thyroid abscess ? Infected fourth branchial cleft cyst. *No radiopaque FB identified.*



US: Solitary 60 x 40mm mixed echogenicity nodule within the left thyroid lobe. Possible haematoma within a cyst or thyroiditis. FNA performed for clarification.

FNA cytology: Abundance of acute inflammatory cells. Some colloid. Suppurative thyroiditis could be considered.

### IMAGING GUIDANCE



### FOLLOW UP ULTRASOUND

The patient improved with antibiotics so was treated conservatively. Follow-up US was arranged following discharge. Persistent mild neck discomfort since discharge.

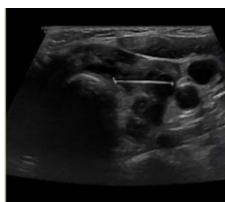


Figure 1 US: Almost complete resolution of previously noted left thyroid collection. 2cm linear echogenic structure suggestive of a foreign body such as a fishbone (Rohu fish). ? migrated from pharynx

### FISHBONE RADIOPAACITY

- MOST RADIOPAQUE- Saltwater Fish
- LEAST RADIOPAQUE- Freshwater Fish

The most common fish eaten in the UK are **haddock** and **cod**, both saltwater and radiopaque. Interestingly, Rohu fish is a freshwater fish, and a member of the carp family, found in Southeast Asia.

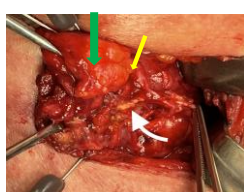
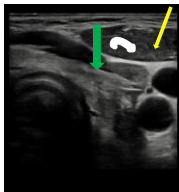
- Knowledge of type of fish ingested can help guidance on assessment and imaging evaluation.
- Given the most common locations of FB impaction is suprahyoide, direct visualisation should be the first step in assessment.
- If not visualised, lateral radiographs can be considered +/- CT neck with contrast depending on level of suspicion/evaluating for complications.
- If nothing visualised but clinically still suspicious repeat clinical assessment with further imaging should be considered.

### CLINICAL EVALUATION

FNE revealed reflux-related changes in the supraglottic larynx. No evidence of asymmetry in the hypopharynx. No evidence of any mass lesion in the pyriform fossa.

Patient was booked in for elective admission for neck exploration and removal of foreign body remnant.

US Vs Surgery



White Arrow Fish Bone    Yellow Arrow: Left vagus nerve    Green Arrow: Left lobe of thyroid

### DISCUSSION

Most common site of impaction of fishbones is usually in the **oropharynx**, especially in the **tonsillar fossa**. Within the **oesophagus** the most common site of impaction is at the site of the **cricopharyngeus muscle**.

- Complications include perforation, haematoma and abscess formation.
- Thin wall, lack of adventitia make the oesophagus more susceptible to perforation.*
- Migratory pathway of the fishbone from digestive tract to outside the thyroid
- In our patient, we suspect the fishbone eroded through the hypopharynx/cervical oesophagus and migrated anterolaterally to just outside the left lobe of the thyroid and deep to vagus nerve.*
- No evidence of 4<sup>th</sup> branchial cleft cyst on FNE.

Clinical examination and lateral radiographs are the mainstay of initial FB diagnosis.

- CT with contrast is the next step in most departments.

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