Small bowel perforation secondary
to an ingested fish bone

A 40-year-old gentleman presented with a one week history of right flank pain, associated with a two day history of
nausea and diarrhoea. On examination, he was found to be tender in the right lumbar area. Blood tests revealed a
WBC of 10.4 x 10^9/L and CRP of 82.4 mg/L.

Initial CT showed a small abscess resulting from a localised perforation of the jejunum by a linear focus of high
attenuation. It measured 2.3 cm x 2 mm and was highly suspicious for a retained foreign body, most likely a fish
bone. On direct questioning, the patient admitted to eating fish on the days prior to his admission.

The patient was managed conservatively with intravenous co-amoxiclav and metronidazole. He improved clinically
and was discharged five days later. His inflammatory markers were normal at time of discharge. A repeat CT carried
out four weeks post discharge showed resolution of the abscess. The presumed fishbone remained, with one tip
intraluminal. On review, the patient remained asymptomatic and the option of a diagnostic laparoscopy was
discussed. A decision was made not to proceed with further investigations, unless he became symptomatic, as he
was reluctant to proceed with surgical exploration. He has remained well on follow-up.

Ingestion of foreign bodies is usually accidental occurring more commonly in those who wear dentures, as the
covered soft palate is unable to identify potentially troublesome objects. It also occurs in those with psychiatric
disorders, in chronic alcoholics and in children [1]. Ingested foreign bodies commonly pass through the
gastrointestinal tract within one week, with less than 1% resulting in intestinal perforation [2]. Perforation may occur
at any site; however, the majority arise at sites of narrowing or acute angulation. The small bowel is most commonly
affected, with around 83% of documented perforations noted in the ileum [3]. The risk of perforation is directly
related to the object’s length and sharpness. The most common offending objects include fish and chicken bones,
metal objects and toothpicks. In cases of delayed diagnosis, perforation may lead to intraperitoneal abscess
formation. Ingested foreign bodies may even migrate to form liver abscesses [4]. Clinical diagnosis is notoriously
difficult as perforation can mimic a variety of other conditions and a proportion of patients may not recall ingesting a
foreign object.

On plain films, a radio-opaque object like a fishbone is often masked by overlying structures, as in our case. With
the advent of more precise radiological imaging, diagnosis can be made without the need for surgery [5]. However,
CT imaging was able to provide us with important information regarding the shape, likely nature and site of
perforation. Similar to our case, there have been case reports in the literature describing the conservative management of patients with contained perforations of hollow viscera secondary to ingested foreign objects [6].

In conclusion, cross-sectional imaging lends itself to a more accurate and timely diagnosis of hollow visceral perforations caused by foreign bodies. As in our case, CT proves a valuable tool in the prediction and follow-up of those cases that are suitable candidates for conservative management.

Differential Diagnosis List: Small bowel perforation secondary to an ingested fish bone, Appendix abscess, Diverticular abscess, Crohn abscess, Tumour abscess

Final Diagnosis: Small bowel perforation secondary to an ingested fish bone

References:
Description: Small fluid collection anteriorly in right flank surrounded by inflammatory stranding of the mesenteric fat. Note the punctate high density focus centrally within the bowel posteriorly which demonstrates reactive thickening. Origin:
Description: Note the intraluminal position of the foreign body (fish bone). Origin:
Description: Coronal view. The arrow indicates the fishbone in the mesenteric fat, its tip remains intraluminal. Origin:
**Description:** Mild residual fat stranding. Note this is most dense surrounding the punctate high density (arrow), representing granulation tissue surrounding the fishbone. **Origin:**
**Description:** Linear high density structure representing fish bone (white arrow) surrounded by inflammatory stranding and abscess. **Origin:**