A Fishy Situation: An Atypical Cause of Liver Abscess

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Patient Presentation

63 year-old male with no significant past medical history presented with 4 days of abdominal pain, chills, emesis, and diarrhea.

- Symptoms started after eating a meal at a new restaurant 1 week prior to admission
- Diarrhea is watery, non-bloody
- Reports non-bloody emesis
- Denies any sick contacts
- Fevers up to 100.6F at home

PMH: None. No known allergies. **Medications:** None

Social History:

- Born in Guinea and grew up in the Ivory Coast
- Moved to the United States 20 years ago, last traveled to Niger 3 years ago
- Works as a truck driver, mainly in the midwestern US
- No recent travel or animal exposures
- Lives in Philadelphia
- Non-smoker; denies alcohol and drug use

Physical Exam

- T:100.6F, BP: 99/58, HR: 94, RR: 28, O2 99% on RA
- General: Comfortable appearing, in no acute distress, breathing comfortably on room air.
- Chest: Clear to auscultation bilaterally
- CV: Normal S1/S2, no murmurs, rubs, or gallops
- Abdomen: Normal bowel sounds. *Soft, non-distended. Tender to palpation in right upper quadrant, without rebound or guarding*

Laboratory Studies

141	105	16		14.7	
			3.4 →30.9*		229
3.4	22	1.57	*(over 9 Days)		

- AST: 91
- ALT: 106
- Alk Phos: 109

Differential Diagnosis

Pyogenic Liver Abscess

- Streptococcal species are the most common cause of hepatic abscess in US
- Enteric Gram negatives also common, with *S. Aureus* and *S. Pyogenes* as rarer causes
- Amoebic Organisms seen in patients with travel to endemic areas
  - *Echinococcus* has characteristic "onion skin" appearance on CT
  - *E. Histolytica* usually presents acutely, however, has been reported years after exposure

What about a Foreign Body?

- Limited number of hepatic foreign body cases reported, dating back to 1898
- Typically from thin, sharp objects that perforate through stomach or duodenum
- May be asymptomatic for prolonged period, and perforation event can be clinically unnoticed
- Often grow oral flora on cultures

Clinical Course

Past History: Distant ingestion of fishbone **3 years prior**

- Asymptomatic, no intervention performed

At Presentation:

- Imaging (CT Abd/Pelvis) – Figure 1
- Blood cultures grew *Streptococcus anginosus* in 2/4 vials

Initial Evaluation/Therapy:

- Upper Endoscopy
  - Revealed erosions/ulcers in the antrum, no perforation or foreign body found
- IR Aspiration
  - Rare *Actinomyces* and *Streptococcus constellatus*
- Initial Therapy: 7 days of Ceftriaxone, Metronidazole

Subsequent Evaluation/Therapy:

- Left Lateral Hepatectomy due to persistent symptoms, leukocytosis, and persistent lesion on repeat imaging
  - Gross findings: "bony substance, such as a fish bone."
  - No growth on surgical cultures
- Continued Amoxicillin/Clavulanate on discharge until follow-up
- Follow-up (2 weeks post-discharge)
  - Well-appearing with 2 fevers of 100.4F in past week
  - Continued antibiotics for additional 10 days pending repeat imaging
- Follow-up (3 weeks post-discharge)----Well-appearing, afebrile
  - Follow-up CT Abd/Pelvis: Postoperative changes from open left lateral hepatic resection. Postoperative mesenteric/omental edema without new fluid collections.
  - Antibiotics discontinued given resolution

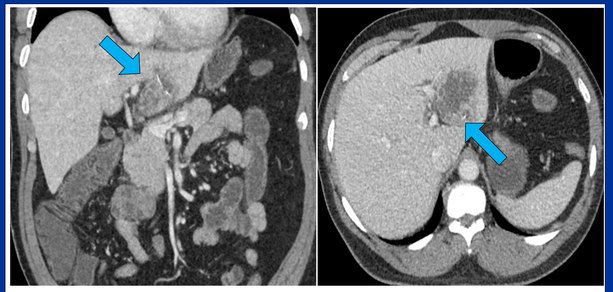


Figure 1: CT Abdomen and Pelvis

- 5.5 x 5.2 x 5.5 cm lobulated, complex borderline soft tissue density, septated cystic lesion in left hepatic lobe suspicious for abscess.
- Additional scattered subcentimeter hypodensities too small to characterize, possibly microabscesses versus cysts.
- Recommend clinical correlation and correlation with aspiration.
- When compared with concurrent ultrasound, there are two thin, short curvilinear hyperdense foci in the posterior aspect of the lateral segment left hepatic lobe, potentially foreign bodies and given density, possibly bones

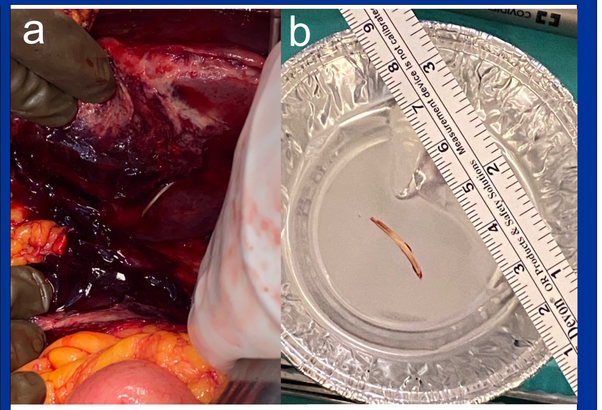
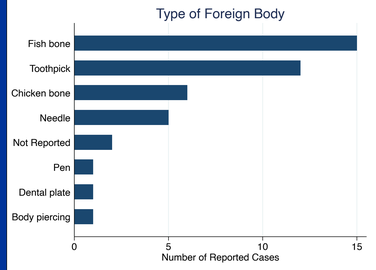


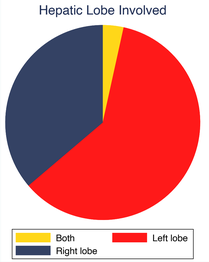
Figure 2: Operative Findings

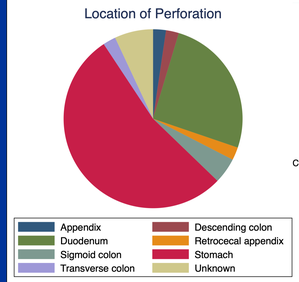
a) Intra-op image showing foreign body in the left lobe of the liver
b) Foreign body after removal

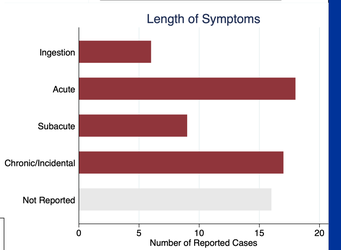
Review of Literature

- Several similar cases of hepatic abscess development secondary to foreign bodies have been reported since the first published case in 1898
- Time between ingestion and presentation is unclear in most cases
  - Patient often does not recall the ingestion, recalls a distant ingestion, or has a foreign body found incidentally
- Tend to present with more subacute/chronic symptoms
  - Symptoms due to acute ingestion will lead to immediate surgical intervention and foreign body removal prior to migration of foreign body









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