

# The Compass

Winter 2020



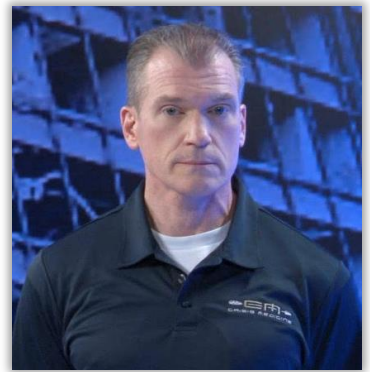
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# Case Report

## Hepatic abscess with Dr. Michael Shertz

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**Dr. Michael Shertz**  
18D/MD, DTM&H

### HPI:

A 74-year-old Indian male arrived in the U.S. one month before presenting to the Emergency Department. He described fever to 38.5C for ten days and intermittent right upper quadrant abdominal pain for “years”. Other than visiting family in the U.S., he spent his entire life in urban southern India. He had seen a U.S. physician a week before and had one negative set of malaria thin and thick smears.

In the ED he was well appearing, but slightly febrile with moderate RUQ tenderness. His laboratory testing was notable for slight liver function test abnormalities and RUQ ultrasound showed a 10 by 6 cm abscess.



Differential diagnosis for a hepatic abscess:

Hepatic Tumor, Pyogenic Liver Abscess, Echinococcal Cyst, or Amebic Liver Abscess

Hepatic tumor:

- Malignant tumors more common than benign lesions.
- Metastatic lesions are most common hepatic neoplasm in the western countries.
- Hepatitis B / C and liver cirrhosis are major causes of hepatocellular carcinoma worldwide.
- Ultrasound is inferior to CT imaging for most hepatic tumors.

Pyogenic abscess:

- Less common worldwide than amebic abscess.
- Fever, focal abdominal tenderness, hepatomegaly, and elevated alkaline phosphatase usually present.
- Patients more commonly present with jaundice, sepsis, and a palpable mass.
- Typically, polymicrobial frequently from a biliary source.
- Treatment involves percutaneous drainage with a catheter or needle. More successfully than surgical drainage (70% for PC, 65% for abx alone and 61% for surgical drainage).<sup>1</sup>
- Diabetes is the most frequently associated disease.
- 95% involve the right lobe of the liver.



### Echinococcal cyst:

- Infection with the cystic / larval stage of *Echinococcus granulosus*, a 2-7 mm dog tapeworm.
- Frequently asymptomatic and most discovered coincidentally.
- RUQ pain / tenderness, fever, jaundice, urticaria, N/V when symptomatic.
- Majority involve right lobe of the liver (77%).

### Amebic liver abscess:

- A parasitic infection caused by the protozoa *Entamoeba histolytica*.
- This parasite is fecal oral spread and causes amebiasis, an intestinal infection that is also called amebic dysentery. After an infection has occurred, the parasite may be carried by the bloodstream from the intestines to the liver.

Table 86-2 Symptoms and Signs of Amebic Liver Abscess

| Symptoms and Signs                         | Range   |
|--------------------------------------------|---------|
| History of symptoms >4 wk                  | 21%–51% |
| Fever                                      | 85%–90% |
| Abdominal tenderness                       | 84%–90% |
| Hepatomegaly                               | 30%–50% |
| Jaundice                                   | 6%–10%  |
| Diarrhea                                   | 20%–33% |
| Weight loss                                | 33%–50% |
| Cough                                      | 10%–30% |
| Male-female ratio                          | 9:1     |
| Immigrant from or traveler to endemic area | Most    |

From Petri WA Jr: Recent advances in amebiasis. Crit Rev Clin Lab Sci 33:1, 1996. Copyright Lewis Publishers, an imprint of CRC Press.

Ultrasound appearance did not support Hepatic tumor or Echinococcal Cyst.

Can you clinically separate ALA from Pyogenic abscess?

- “It was not possible to differentiate between amoebic and pyogenic liver abscess on clinical grounds, routine investigations and imaging techniques.”<sup>2</sup>
- “Aspiration of pus, was most helpful in differentiating the two types of abscesses.”<sup>2</sup>
- “Serological testing for *E. histolytica* was highly specific and sensitive for amoebic liver abscess.”<sup>2</sup>
- “In our setting, amebic abscess is more prevalent and, in most circumstances, can be identified and managed without percutaneous aspiration.”<sup>3</sup>

### Serology:

- Serum antigen detection has a sensitivity of 95%.
- Stool microscopy only 10 to 40% sensitive.

### Treatment:

- Metronidazole 500 mg 3 - 4 doses a day x 10 days.
- Since the parasite can persist in the intestine in 40 to 60% of patients also need treatment with a “luminal agent” to clear *E. histolytica* cysts.
- Paromomycin 500 mg tid x 7 days.

### Follow Up:

- Feeling better, fever resolved, and lab abnormalities improving.
- Repeat hepatic ultrasound on day 13 essentially unchanged.
- Ultrasound resolution may take 10 to 300 days.<sup>4</sup>

1 Pyogenic liver abscess. Changes in etiology, management, and outcome. Medicine 1996 Mar;75(2):99-113. Mortality rate between 6 and 20%, depending on study.

2 Ahsan T, et al. Amoebic versus pyogenic liver abscess. J Pak Med Assoc. 2002 Nov;52(11):497-501

3 Lodhi S, Et All. Features distinguishing amoebic from pyogenic liver abscess: a review of 577 adult cases. Trop Med Int Health. 2004 Jun;9(6):718-23.

4 Simjee AE. Clin Radiol. 1985 Jan;36(1):61-8.

