PYOGENIC LIVER ABSCESS


Take home points:
1. Pyogenic liver abscesses are most commonly the result of ascending biliary infection.
2. The microbiology of the abscess varies tremendously based on the source of infection and is frequently polymicrobial.
3. Clinical presentation may be incredibly non-specific and will not involve the RUQ in 50% of cases.
4. Definitive treatment usually involves drainage in addition to antibiotics.

Pathophysiology:
• Pyogenic liver abscesses are most commonly the result of ascending biliary infection (~ 30% of cases).
• Other sources:
  – Direct extension from intraabdominal infection
  – From portal vein (pylephlebitis)
  – Hematogenous spread

Microbiology:
• Depends on original source of infection.
• Frequently polymicrobial.
  – Biliary source: enteric aerobic gram-negative bacilli and enterococcus.
  – Intra-abdominal source: Mixed enteric flora, including B. fragilis
  – Hematogenous spread: Single organisms like S. aureus or Streptococcus milleri, anaerobes
  – Reports of isolated Klebsiella liver abscesses in Taiwan
  – Candida is not uncommon in immunosuppressed patients
  – Consider amebic abscess (E.histolytica) in patients from endemic areas (non-industrialized areas with poor sanitation) or with HIV; overwhelmingly affects men more than women

Clinical pearls:
• Signs and symptoms are frequently non-specific.
• Symptoms referable to RUQ in only 50% of cases
• Fever present in 90% of patients
• Diagnostic tests:
  – Elevated alkaline phosphatase most “reliable” LFT abnormality, although elevations in any liver enzyme may be seen.
  – Some may have elevated R hemidiaphragm, RLL infiltrate, or right-sided effusion on CXR
  – Well visualized on ultrasound or CT scan
  – Amebic serologies will be positive in 95% of cases

Treatment: requires drainage and antibiotics

<table>
<thead>
<tr>
<th>Suspected source</th>
<th>Primary therapy</th>
<th>Alternative therapy</th>
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<tbody>
<tr>
<td>Biliary</td>
<td>Amp/Gent ± Flagyl</td>
<td>Imi/Mero or Vanc/Gent/Flagyl</td>
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<tr>
<td>Intraabdominal</td>
<td>CFTX/flagyl</td>
<td>Zosyn or Cipro/Flagyl</td>
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• Tailor antibiotics once you have microbiologic data from drainage.
• Surgical drainage indicated if IR-guided drainage fails
• Amebic liver abscesses usually resolve with antimicrobial therapy alone