QUESTION 24

A 45-year old man presents with a one-week history of anorexia, vomiting and abdominal pain. He denies any fever, but has noted his sclera to be icteric in the last three days. There is a history of intravenous drug use to the age of 25 years. There are no recent prescribed or over-the-counter medications. He drinks the equivalent of 100g of alcohol per day, with frequent heavy intake on weekends.

Examination confirms icterus, but there are no peripheral stigmata of chronic liver disease. There is moderate to severe tenderness in the right upper quadrant. The liver is percussion at 18cm in the mid-clavicular line. There is no splenomegaly. Cardiovascular, respiratory and peripheral nervous system examinations are normal.

Routine blood tests show:

<table>
<thead>
<tr>
<th>Test</th>
<th>Result</th>
<th>Normal Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>white cell count</td>
<td>$12.5 \times 10^9$ /L</td>
<td>[3.5-10.5]</td>
</tr>
<tr>
<td>haemoglobin</td>
<td>145 g/L</td>
<td>[125-165]</td>
</tr>
<tr>
<td>platelet count</td>
<td>$345 \times 10^9$ /L</td>
<td>[150-450]</td>
</tr>
<tr>
<td>sodium</td>
<td>132 mmol/L</td>
<td>[135-150]</td>
</tr>
<tr>
<td>potassium</td>
<td>4.1 mmol/L</td>
<td>[3.5-5.0]</td>
</tr>
<tr>
<td>urea</td>
<td>8.2 mmol/L</td>
<td>[3.5-8.0]</td>
</tr>
<tr>
<td>creatinine</td>
<td>0.10 mmol/L</td>
<td>[0.06-0.10]</td>
</tr>
<tr>
<td>bilirubin</td>
<td>125 μmol/L</td>
<td>[7-21]</td>
</tr>
<tr>
<td>alkaline phosphatase (ALP)</td>
<td>235 U/L</td>
<td>[40-110]</td>
</tr>
<tr>
<td>gamma glutamyltranspeptidase(GGT)</td>
<td>976 U/L</td>
<td>[10-40]</td>
</tr>
<tr>
<td>aspartate transaminase (AST)</td>
<td>780 U/L</td>
<td>[15-40]</td>
</tr>
<tr>
<td>alanine transaminase (ALT)</td>
<td>560 U/L</td>
<td>[15-40]</td>
</tr>
<tr>
<td>albumin</td>
<td>34 g/L</td>
<td>[35-45]</td>
</tr>
</tbody>
</table>

The most likely explanation for this clinical scenario is:

A. Advanced cirrhosis  
B. Alcoholic hepatitis  
C. Acute cholecystitis  
D. Acute viral hepatitis  
E. Hepatoma

Just for reference, 1 beer contains 12g of alcohol.

This patient does not have any evidence of chronic liver disease so can eliminate advanced cirrhosis. Hepatomas are associated with chronic liver disease and are generally asymptomatic.

**ACUTE VIRAL HEPATITIS**

Acute viral hepatitis is possible but less likely in this patient as he has not recent risk factors.
Acute hepatitis A in adults can vary from flu-like illness to fulminant hepatic failure. Clinical features include jaundice and hepatomegaly. Notable laboratory findings are marked elevations of ALT and AST usually >1000, bilirubin and ALP. ALT often >ALT. Also get elevated acute phase reactants.

Acute hepatitis B is asymptomatic in 70% of patients. In symptomatic patients, features include anorexia, nausea, jaundice, RUQ discomfort. AST and ALT often 1000 to 2000 – ALT > AST.

Acute hepatitis C is usually asymptomatic (in 75%). If symptomatic – malaise, nausea, RUQ discomfort, jaundice.

ACUTE CHOLECYSTITIS

- Abdominal pain main feature
- Nausea, vomiting, anorexia can occur
- Increased WCC, neutrophils
- In uncomplicated cholecystitis, may not see elevated bilirubin or ALP
- Can get a mild elevation in ALT and AST with jaundice and obstructive picture
- Elevations in ALT and AST are too severe in this case and picture is more hepatocellular than obstructive

ALCOHOLIC HEPATITIS

This patient has a history of alcohol abuse and acute hepatitis – this fits with alcoholic hepatitis.

Clinical Features

- Fever
- Hepatomegaly – hepatic swelling due to cell injury and protein retention plus underlying fatty liver
- Jaundice
- Anorexia
- Ascites (30%) – due to transient hepatic swelling and portal obstruction rather than fixed fibrosis
- Tender hepatomegaly common, abdominal pain is not

Pathogenesis

- Severe alcoholic liver disease in men usually develops after >60-80g per day of alcohol for 10 years
- Lower amounts of alcohol needed in women
- Other risk factors include hepatitis C, genetic factors and malnutrition
- Most alcoholics don’t get alcoholic liver disease (only 15%)

Laboratory Features
- Modest elevation in AST, ALT (2 to 7x)
- AST/ALT usually >1
- GGT elevated but non-specific
- Bilirubin may be markedly elevated without corresponding elevations in ALP

Prognosis

- Critically ill patients with alcoholic hepatitis have short-term mortality rates near 70%
- Severe alcoholic hepatitis present when INR elevated, anaemic, bilirubin >137, renal failure, ascites

Treatment

- Abstinence
- Nutritional support

Answer: B