Case Presentations: Problem Cases from the Liver/GI Consult Service
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Disclosures
• Philips, consultant

What kind of case requires consultation?
1. Common tumor, but something is unusual
2. Uncommon tumor or uncertain malignant potential
3. Diagnosis and clinical scenario discordant
4. Distinct features of two different disease processes
5. Uncertainty about a new classification/reporting system
6. Limited sample, non-diagnostic
7. Active liver injury, etiology uncertain
8. Pediatric liver disease
CASE

- Adult female with hepatic rupture and a 10 cm entirely necrotic hepatic mass

CK7
CASE

- Adult male with a strongly enhancing 3 cm liver tumor on CT-scan
- Radiologist differential includes HCC, neuroendocrine tumor, and vascular tumor
- Biopsy was concerning for angiosarcoma
  Patient underwent resection
<table>
<thead>
<tr>
<th></th>
<th>HSVN (n=17)</th>
<th>AS (n=10)</th>
<th>CH (n=6)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average age (range)</td>
<td>54 years (24 – 83 years)</td>
<td>51 years (34-69 years)</td>
<td>48 years (36-63 years)</td>
</tr>
<tr>
<td>Gender (M:F)</td>
<td>13:4</td>
<td>4:6</td>
<td>3:3</td>
</tr>
<tr>
<td>Average size (range)</td>
<td>2.1 cm (0.2 – 5.5 cm)</td>
<td>6.2 cm (2.5 – 10 cm)</td>
<td>6.6 cm (1.1 - 15 cm)</td>
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<tr>
<td>Metastasis</td>
<td>None</td>
<td>Lung, heart, bone</td>
<td>None</td>
</tr>
<tr>
<td>Outcome</td>
<td>ARD(6)/ANE(6)</td>
<td>DOD(2)</td>
<td>ANED (4)</td>
</tr>
<tr>
<td>Maximum follow up (months)</td>
<td>72</td>
<td>7</td>
<td>72</td>
</tr>
</tbody>
</table>

HSVN – Hepatic small vessel neoplasm; AS – Hepatic angiosarcoma; CH - Cavernous hemangioma; ARD – Alive with residual disease; ANE – Alive with no evidence of disease; DOD – Dead of disease
Hepatic Small Vessel Neoplasm

CASE

- Adult female with a 5 cm well-circumscribed mass with CT imaging suggestive of steatosis
- Radiologist favors HCC
- Biopsy was performed

Glutamine Synthetase
Glutamine Synthetase

Image courtesy of Linda Ferrell, MD
Fatty FNH as a mimic of HCC


HCC ("steatohepatitic variant")

Image courtesy of Linda Ferrell, MD

Central zone arterioles in NASH

Advanced Fibrosis
Clinical Significance

- Arteries in scarred central zones and unpaired arteries in parenchyma are common in NASH and should not suggest a neoplasm
- Sinusoidal capillarization is common in NASH and does not suggest neoplasia

Centrizonal Arteries in Non-alcoholic Steatohepatitis (NASH)


CASE

- Adult female with fatty liver on ultrasound, mild transaminitis, elevated ALP, and hyperlipidemia
- Core liver biopsy performed to rule out NASH or other process
NASH with primary biliary cholangitis (PBC)


CASE

- Adult female with a 6 cm liver mass, stable in size since 2012, who underwent wedge biopsy
• Well differentiated hepatocellular neoplasm with patchy reticulin fragmentation and LFABP loss
• Recommend resection for definitive classification

Complete loss of LFABP staining is seen in ~30% of HCC, including well differentiated HCC


Another pitfall
CASE

- Adult female with acute myeloid leukemia, on induction chemotherapy for allogeneic BMT, presented with right lower quadrant pain and CT imaging suggestive of acute appendicitis
- Laparoscopic appendectomy was performed and converted to open ileocecectomy due to necrotic appendix and ileum
Suspect angio-invasive fungal infection in neutropenic patients with ischemic bowel

CASE

• Adult male presented with fever, chills, nausea, and abdominal pain
• CT showed rim enhancing liver lesions with differential between metastatic colon cancer, amoebic abscess, or bacterial abscess related to sigmoid diverticulitis
• Biopsy performed, tissue culture is negative
Fusobacterium sp. infection should be considered in culture negative hepatic abscess

CASE

- Adult male with history of low grade fever, abdominal pain, weight loss, Crohn's disease, and hepatosplenomegaly.
- Transaminases mildly elevated
- On steroids and infliximab
- EBV serology positive

Imaging:
- CT scan confirms massive ascites and identifies retroperitoneal lymphadenopathy.
- No liver lesions

Transjugular liver biopsy is performed to assess the etiology of acute liver dysfunction

Sinusoidal Infiltrate
Focal Necrosis

Hemophagocytosis

Cytologic Atypia

Mitotic Activity
Aggressive NK Cell Leukemia

- Similar presentation to HSTL and fulminant course
- NK cell neoplasm with a leukemic component
- CD2+, cCD3+, CD56+, TIA-1+, Granzyme B+
- T-cell markers negative (sCD3, CD5)
- EBER positive, TCR genes germline
- Hemophagocytosis
Prolonged Transaminitis Following Acute Viral Illness

EBER ISH +

EBV Hepatitis

CD3