Hepatitis Clinician Guidelines

Statistics

- Hepatitis C infection is the leading cause of cirrhosis and hepatocellular carcinoma in the United States, while hepatitis B is the leading cause worldwide.
- Chronic hepatitis C infection is the most common indication for liver transplantation.
- At least 2/3 of hepatocellular carcinoma cases are due to hepatitis B or C infection.
- Hepatitis B or C infection in pregnant women poses a serious risk of perinatal transmission.

Risk Factors

- People at risk for hepatitis B are:
  - Immigrants from Southeast Asia, the Mediterranean and sub-Saharan Africa
  - Individuals with multiple sexual partners
  - Men who have sex with men
  - Individuals with a history of injection drug abuse
  - Individuals with tattoos
  - Autoimmune disease (especially lichen planus)
  - History of psychiatric illness or psychiatric admission
- Approximately 40% of prisoners are infected with hepatitis C
- Patients with a trivial (i.e., less than 3-fold) rise in ALT AST, should be tested for hepatitis B and C
- Patients with alcoholism, diabetes or obesity are at special risk for progression of disease

Treatment

- Medications are available to minimize the risk of cirrhosis and hepatocellular carcinoma
- Treatment of hepatitis B is effective in approximately 90% of patients with minimal side effects.
- Treatment of hepatitis C achieves cure in 70-80% of patients
- Newly approved medications for hepatitis C may achieve a cure in nearly 90% of patients.
- At the University of Utah, Tiffany Tomkinson (801-585-9155, Tiffany.Tomkinson@hsc.utah.edu) can arrange clinic visits or inclusion in clinical trials that use hepatitis B or C medications.

Lab Testing

- Hepatitis B

<table>
<thead>
<tr>
<th>Lab tests</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>HBsAg &amp; Anti-HBc</td>
<td></td>
</tr>
<tr>
<td>IgM anti-HBc &amp; Anti-HBs</td>
<td></td>
</tr>
<tr>
<td>Interpretation</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Susceptible</td>
</tr>
<tr>
<td></td>
<td>Immune due to natural infection</td>
</tr>
<tr>
<td></td>
<td>Immune due to hepatitis B vaccination</td>
</tr>
<tr>
<td></td>
<td>Acutely infected</td>
</tr>
<tr>
<td></td>
<td>Chronically infected</td>
</tr>
<tr>
<td></td>
<td>Interpretation unclear**</td>
</tr>
</tbody>
</table>

**4 possibilities possible: 
1. Resolved infection (most common)
2. False possible anti HBc, thus susceptible
3. “Low level” chronic infection
4. Resolving acute infection

- Hepatitis C

<table>
<thead>
<tr>
<th>Lab tests</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anti-HCV screening</td>
<td>Positive</td>
</tr>
<tr>
<td>HCV-RNA assay verification</td>
<td>Negative</td>
</tr>
<tr>
<td>Interpretation</td>
<td>No infection Resolution of infection or acute infection with low viremia Acute or chronic infection</td>
</tr>
</tbody>
</table>

Prevention

- The hepatitis B vaccination series provides more than 98% of healthy adults with adequate antibody protection against infection.
- The risk of contracting hepatitis B or C may be reduced through condom use, elimination of needle, razor or toothbrush sharing or use of latex or plastic gloves when handling blood.
- Patients with hepatitis B need to be vaccinated for hepatitis A
- Patients with hepatitis C need to be vaccinated for hepatitis A and B
- Sexual contacts of hepatitis B patients need to be vaccinated against hepatitis B

Additional resources: [http://www.mayomedicallaboratories.com/media/articles/algorithms/1245-hbv.pdf](http://www.mayomedicallaboratories.com/media/articles/algorithms/1245-hbv.pdf)