Transjugular Intrahepatic Portosystemic Shunting (TIPS) in the Management of Hepatic Hydrothorax

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Disclosure

Speaker name: Umair Munawar

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I have the following potential conflicts of interest to report:

☐ Consulting
☐ Employment in industry
☐ Stockholder of a healthcare company
☐ Owner of a healthcare company
☐ Other(s)

☒ I do not have any potential conflict of interest
**Introduction**

- Hepatic hydrothorax (*HH*): Pleural effusion as complication of cirrhosis.
  - 5-15% of cirrhotics, >90% are Child-Pugh B/C

- **Pathogenesis**: Unclear, thought to be ascites leaking from diaphragmatic defects

- **Presentation**: Cirrhosis stigmata with dyspnea, cough, pleuritic chest pain, fatigue, transudative pleural effusion

- **Diagnosis**: Clinical suspicion. Cirrhosis + pleural effusion + exclusion of other causes (pleural fluid analysis)
  - Alternative causes: CHF, pulmonary hypertension, pneumonia, metastatic or primary lung cancer

- **Additional testing** (*optional*): Echocardiography, scintigraphy
  - 20% have alternative identifiable cause

- **Management**: Sodium restriction, diuretics, serial thoracenteses, TIPS, transplant, pleurodesis, diaphragmatic repair

- **Prognosis**: Poor
  - 25% are refractory to standard treatments
  - Mean time from presentation to death 1 year overall, 2.3 years with TIPS
Scintigraphic Shunt Studies

**Figure 1** (above):
Chest X-ray (**1A**) and computerized tomography (**1B**) images demonstrating a large right-sided pleural effusion in a patient diagnosed with HH.

**Figure 3** (left):
Scintigraphy demonstrating radiotracer in the pleural space (**3A**) 15 minutes after peritoneal administration (**3B**).

**Figure 4** (above):
Overlay of anatomy on scintigraphic image.
Results

Overall time to HH recurrence post-TIPS for HH that resolved with initial TIPS.

<table>
<thead>
<tr>
<th>Time to HH Recurrence</th>
<th>Number of Patients</th>
</tr>
</thead>
<tbody>
<tr>
<td>≥ 12 Months</td>
<td>10</td>
</tr>
<tr>
<td>≥ 18 Months</td>
<td>6</td>
</tr>
<tr>
<td>≥ 24 Months</td>
<td>3</td>
</tr>
<tr>
<td>≥ 30 Months</td>
<td>2</td>
</tr>
<tr>
<td>≥ 36 Months</td>
<td>1</td>
</tr>
</tbody>
</table>

Months until HH recurrence by number of TIPS revisions for HH that resolved with initial TIPS.
Results

Relationship between whether shunt study was performed and number of TIPS revisions for all patients in this study.

Total number of TIPS revisions required and relationship to efficacy of the initial TIPS for all patients in this study.

Total number of TIPS revisions required and relationship to overall survival for all patients in this study.
Conclusions

• TIPS and TIPS revisions are efficacious treatments for HH
• TIPS procedures may need to be repeated to provide morbidity and mortality benefits for patients

Future Directions:
• Does the performance of a shunt study improve outcomes?
• Does the performance of a shunt study affect TIPS utilization?


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