Recognition and Management of Spontaneous Bacterial Peritonitis

Kenneth E. Sherman, MD, PhD, FACP
Gould Professor of Medicine
Director, Division of Digestive Diseases
University of Cincinnati College of Medicine
Cincinnati, Ohio
Disclosure Information

- Research grants or contracts awarded to his institution from Anadys, AbbVie, Bristol-Myers Squibb, Genentech, Gilead Sciences, Inc, Merck & Co, Inc, Vertex Pharmaceuticals, Inc

- Advisory board member or consultant to Bioline, Fibrogen, Kadmon, Merck & Co, Inc, MedPace, Janssen Therapeutics (formerly Tibotec), Roche Molecular
Outline

- Diagnosis of spontaneous bacterial peritonitis
- Management of spontaneous bacterial peritonitis
- Indications for spontaneous bacterial peritonitis prophylaxis
- Regimens for spontaneous bacterial peritonitis prophylaxis
Diagnosis of Spontaneous Bacterial Peritonitis
Spontaneous Bacterial Peritonitis (SBP): Diagnosis

- Diagnosis of SBP:
  - Positive ascitic fluid bacterial culture
  - Absolute polymorphonuclear leukocyte (PMN) count at or above 250 cells/µL
  - Total white blood cell count above 500 cells/µL
  - No evident intra-abdominal source of infection

## Terminology for Ascitic Fluid Infections

<table>
<thead>
<tr>
<th>PMNs</th>
<th>Culture</th>
</tr>
</thead>
<tbody>
<tr>
<td>SBP</td>
<td>Positive</td>
</tr>
<tr>
<td>&gt; 250 cells/µL</td>
<td></td>
</tr>
<tr>
<td>Culture-negative neutrocytic ascites</td>
<td>Negative</td>
</tr>
<tr>
<td>&gt; 500 cells/µL</td>
<td></td>
</tr>
<tr>
<td>Monomicrobial nonneutrocytic bacterascites</td>
<td>Positive</td>
</tr>
<tr>
<td>&lt; 250 cells/µL</td>
<td></td>
</tr>
</tbody>
</table>

Management of Spontaneous Bacterial Peritonitis
Management of SBP

- Antibiotics intravenously for 5 days
  - Cefotaxime
  - Other third generation cephalosporins
  - Ciprofloxacin (if β-lactam allergic)
- Consider repeat paracentesis at 48 to 72 hrs
Albumin infusion: dose of 1.5 g per kg body weight within 6 hours of SBP diagnosis, followed by 1 g per kg of body weight on day 3

Albumin infusion reduced mortality from 29% to 10%

Indications for Spontaneous Bacterial Peritonitis Prophylaxis
Indications for Spontaneous Bacterial Peritonitis Prophylaxis

- One or more episodes of SBP
- Low ascitic fluid protein: less than 1 mg/dL to 1.5 mg/dL
- Ability to continue until resolution of ascites, liver transplantation, or death
- Short-term prophylaxis indicated in setting of variceal bleeding
Regimens for Spontaneous Bacterial Peritonitis Prophylaxis
Regimens for SBP Prophylaxis

- Ciprofloxacin 750 mg per week or 500 mg per day
- Norfloxacin 400 mg per day
- Trimethoprim-sulfamethoxazole 1 double-strength per day (5 days/week)

Summary

- SBP and subsets of ascitic fluid infections are defined by the ascitic fluid cell count and bacterial culture of the fluid.
- Several antibiotic regimens are effective for treatment.
- Use of albumin in patients with SBP improves survival.
- Prophylaxis with antibiotics reduces risk of recurrent SBP.
End

This presentation is brought to you by the International Antiviral Society-USA (IAS-USA) in collaboration with Hepatitis Web Study & the Hepatitis C Online Course

Funded by a grant from the Centers for Disease Control and Prevention