

Spontaneous bacterial peritonitis in cirrhosis

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1 Spontaneous bacterial peritonitis is a common complication of cirrhosis with high risk of death

Bacterial infection of ascites fluid, most commonly from *Escherichia coli* or *Klebsiella pneumoniae*, causes the condition.¹ Its prevalence in patients with cirrhosis is 10.8% in North America, and nearly 25% of patients die despite appropriate antibiotic treatment.²

2 The presentation varies and patients may not have abdominal pain or fever

Spontaneous bacterial peritonitis is often a trigger for cirrhotic decompensation, which can manifest as isolated hepatic encephalopathy, gastrointestinal bleeding, renal failure, increasing ascites volume or any vital sign abnormalities, including hypothermia.^{1,3} Given its highly variable presentation, the current guideline recommends that every patient who presents urgently to hospital with cirrhosis and ascites be tested for the condition.¹

3 Prompt diagnosis is required to reduce risk of death

A paracentesis that shows ascites fluid with a polymorphonuclear leukocyte count of 250 cells/mm³ ($0.25 \times 10^9/L$) or greater confirms the diagnosis. In 1 study, delaying paracentesis by 12 hours resulted in a 2.7-fold increase in odds of death. Clinicians should perform paracentesis as soon as possible.⁴

4 Empiric antibiotic treatment requires consideration of local resistance patterns

In North America, antibiotic resistance in spontaneous bacterial peritonitis is 17.8%, with methicillin-resistant *Staphylococcus aureus* the most common resistant organism.² Empiric treatment in low-resistance areas is a third-generation cephalosporin, and in high-resistance areas is piperacillin–tazobactam.¹

5 Clinicians should prescribe albumin within 6 hours of diagnosis to confer a mortality benefit

Albumin has a number needed to treat of 6 patients to prevent 1 death, and of 4 patients to prevent 1 case of renal failure, if given within 6 hours of diagnosis of spontaneous bacterial peritonitis.⁵ The latest guideline recommends that, in addition to fluid resuscitation, albumin be given to all patients with the condition.¹ Recommended dosing is albumin 1.5 g/kg on day 1 and 1 g/kg on day 3.¹

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