Kentucky Antimicrobial Stewardship Innovation Consortium

Educational Pearl

Spontaneous Bacterial Peritonitis Prophylaxis Simplified

Spontaneous bacterial peritonitis (SBP) is a common infection in patients with cirrhosis and ascites.[1] Estimated inpatient mortality has been reported to be as high as 20% and following an episode of SBP, 70% of patients will have a recurrence within 1 year.[1] SBP may be prevented with prophylactic antibiotics. Who should receive SBP prophylaxis? How long should prophylaxis last?

What is the difference between primary and secondary SBP prophylaxis?
Secondary SBP prophylaxis is given to patients who have resolved an episode of SBP in order to prevent a subsequent episode. Primary prophylaxis is given to high risk patients without any history of SBP. The antibiotic selection and duration varies as below.

Primary SBP Prophylaxis:

Indication	Antibiotic Regimen[1, 4, 5]	Duration	Comments
Cirrhosis with acute **upper** gastrointestinal hemorrhage	Ceftriaxone 1g IV q24h	Until hemorrhage has resolved and vasoactive drugs are discontinued (Maximum of 7 days)	Prophylaxis has shown to reduce the rate of infections including SBP and improved survival[2]
Cirrhosis with low ascitic protein (<1.5 g/dL) **AND** at least one of the followings: • Advanced liver failure (Child-Pugh score > 9 points with serum bilirubin level > 3 mg/dL) • Impaired renal function meeting one of the following: ○ serum creatinine level > 1.2 mg/dL ○ blood urea nitrogen level > 25 mg/dL ○ serum sodium level < 130 mEq/L	One of following: • Ciprofloxacin 500 mg PO daily • TMP-SMX 1 DS PO daily • Rifaximin 400 mg PO TID • Norfloxacin 400 mg PO daily (not available in US)	During hospitalization and potentially indefinitely until ascites resolves	Prophylaxis has shown to reduce SBP and survival at 1 year[3]

Secondary SBP Prophylaxis:

Indication	Antibiotic Regimen[1, 4, 5]	Duration	Comments
Prior episode of SBP	One of following: • Ciprofloxacin 500 mg PO daily • TMP-SMX 1 DS PO daily • Rifaximin 400 mg PO TID • Norfloxacin 400 mg PO daily (not available in US)	Indefinitely	Prophylaxis has shown to reduce SBP recurrence compared to placebo (68% vs 20% at 1 year)[4]

Key Takeaways: Primary SBP prophylaxis is indicated in all patients with cirrhosis and have acute upper GI hemorrhage. In patients with cirrhosis and low ascitic protein (< 1.5 g/dL), primary SBP prophylaxis can be considered in those with advanced liver failure or impaired renal function. Indefinite secondary prophylaxis is recommended in all patients with prior episode of SBP due to high risk of recurrence.

References:

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