APPROPRIATE AND TIMELY ANTIMICROBIAL PROPHYLAXIS IN CIRRHOTIC PATIENTS WITH SPONTANEOUS BACTERIAL PERITONITIS AND SEPTIC SHOCK: A RETROSPECTIVE COHORT STUDY.

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Introduction: Spontaneous bacterial peritonitis in cirrhotic patients carries significant mortality. Time delay to appropriate antimicrobial therapy has been shown to significantly impact outcome in critically ill patients with septic shock.

Objectives: To determine whether practice-related aspects of antimicrobial therapy contribute to the high mortality from septic shock among patients with cirrhosis and spontaneous bacterial peritonitis (SBP). We examined the relationship between aspects of initial antimicrobial therapy and mortality in these patients along with other covariates on in-hospital mortality.

Methods: From the Cooperative Antimicrobial Therapy of Septic Shock (CATTs) Database Research Group between 1996 and 2011, a nested retrospective cohort study of all cirrhotic patients with septic shock, cirrhosis (biopsy-proven cirrhosis or documented portal hypertension) and evidence of SBP (neutrophil count > 250 or positive ascitic culture).

Results: Among 126 patients (mean age 55 years, 60% male), overall hospital mortality was 81.8%. In comparing survivors (n=23) with non-survivors (n=103), survivors had lower mean APACHE II (22(7) vs. 32(8), MELD (24(9) vs.34 (11) and serum lactate on admission (4.9(3.1) vs. 8.9(5.3), p

Conclusion: Cirrhotic patients with septic shock secondary to SBP have high mortality (> 80%). Each hour of delay in appropriate antimicrobial therapy was associated with a 1.86 times increase in hospital mortality. Admission APACHEII and serum lactate also significantly impacted hospital mortality. Earlier identification of septic shock and initiation of antimicrobial therapy could potentially improve outcome in this patient population.

References: Figure 1 legend  TILES A, B, C: Predicted death rate (univariable regression) according to APACHE II, lactate and time to antibiotics (hours). Grey bands represent 95% Confidence Intervals.  TILE D: Predicted death rate according to time to antibiotics for different APACHEII values. Regression lines for APACHEII scores of 20,30 and 40 have been selected as representative.