

Evaluation of Albumin In Spontaneous Bacterial Peritonitis

BACKGROUND

Spontaneous bacterial peritonitis (SBP) is among one of the major complications of cirrhotic liver disease. Defined as an ascitic fluid infection, it can be life-threatening to patients with or without proper treatment. Current recommendations from the American Association for the Study of Liver Diseases (AASLD) dictate that patients with ascitic fluid polymorphonuclear leukocyte counts (PMN) ≥ 250 cells/mm³ and with a clinical suspicion of SBP be treated with IV antibiotics and albumin. With appropriate antibiotics, concurrent albumin administration has shown to reduce rates of mortality.

Target doses of albumin are patient-specific and are based on weight in kilograms. Albumin has shown to be beneficial in patients with SBP based on a handful of clinical trials and its use is recommended by the AASLD. However, it is unknown how albumin is being used in practice and whether target doses are being achieved. Subtherapeutic albumin dosing can potentially lead to worse clinical outcomes.

OBJECTIVE

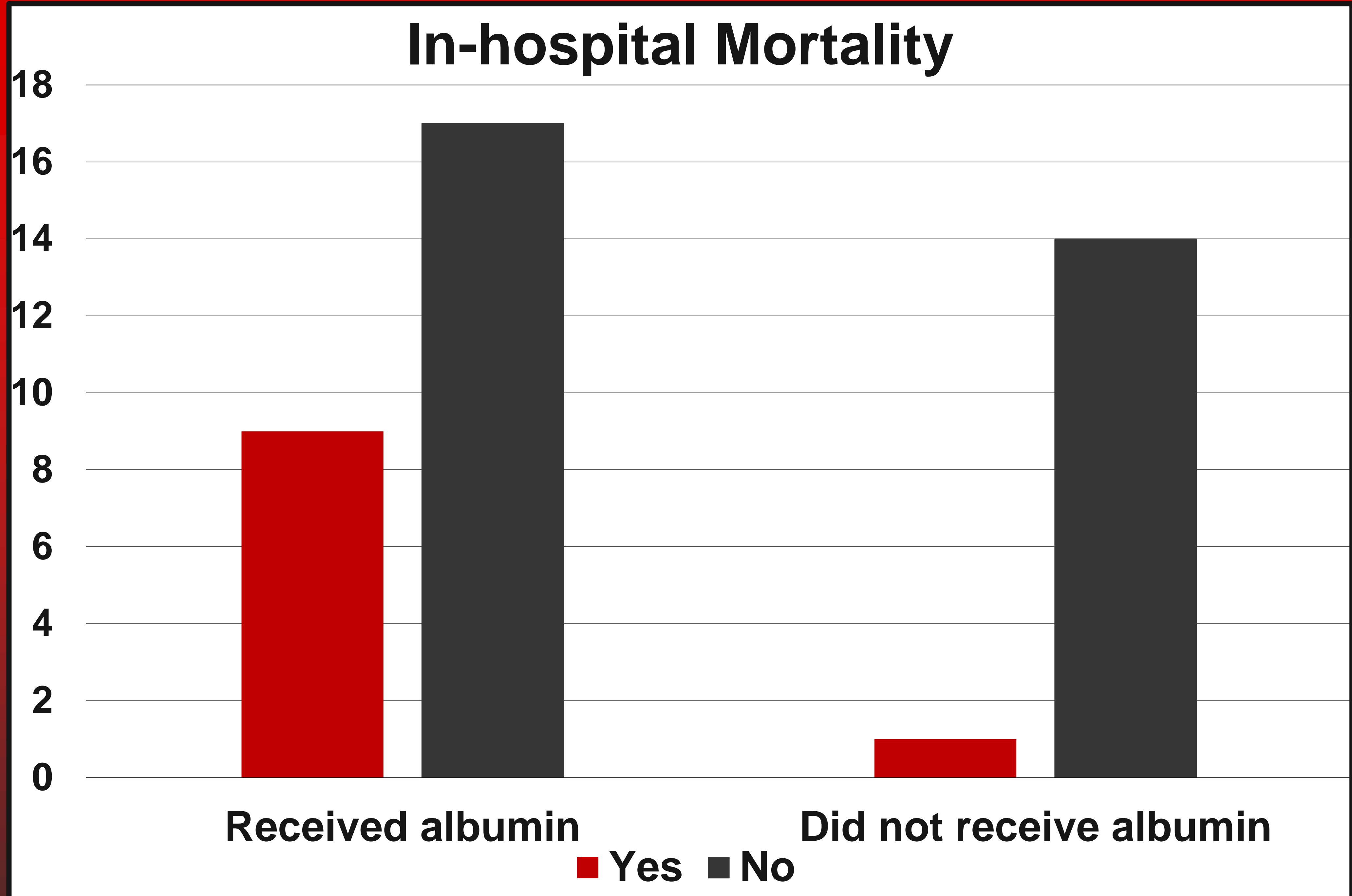
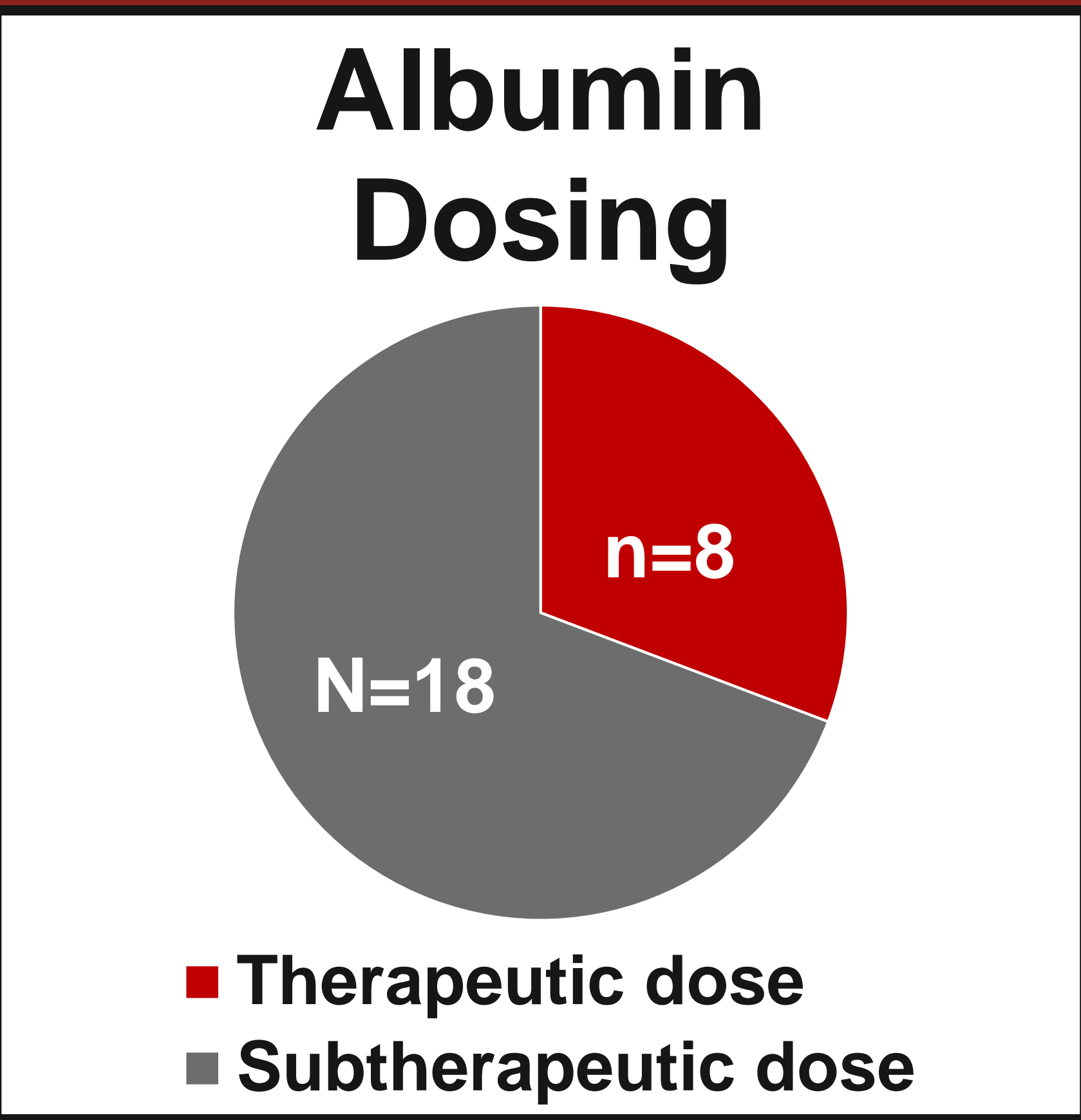
To evaluate the use of weight-based human albumin administration in the setting of spontaneous bacterial peritonitis and determine if differences in dosing resulted in changes to in-hospital mortality and other secondary outcomes at a county tertiary teaching hospital.

METHODS

Study population consists of patients admitted to University Medical Center (UMC) in Lubbock, TX from November 1, 2013 through November 15, 2018. Criteria for study inclusion was decided as ascitic fluid PMN counts ≥ 250 cells/mm³ and clinical suspicion of SBP, ages 18-89 years old, receipt of empiric antibiotic therapy for SBP for at least 5 days, or ICD-9/ICD-10 billing codes for spontaneous bacterial peritonitis.

RESULTS

Baseline Characteristics			
	Received Albumin (n=26)	Did not receive albumin (n=15)	p-value
SAPS II Score	23.2	17.0	0.11
MELD Score	25.3	13.6	0.003



CONCLUSIONS

The results of this study indicate that the receipt of albumin in the setting of SBP is associated with higher mortality rates and longer hospital lengths of stay. They also had higher predicted mortality according to SAPSII and MELD. Also at the institution, albumin was dosed appropriately less than half the time in the setting of SBP.

LIMITATIONS

The results of this study are limited by the single-center design and may not apply to other hospitals. Also, the small sample size of patients may not accurately represent the population of patients with SBP who receive albumin and their clinical outcomes

SELECTED REFERENCES

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