

# Evaluation of Spironolactone and Furosemide Use in Hospitalized Patients with Cirrhosis and Ascites

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## Abstract

### Purpose:

This study assessed patients with cirrhosis and their pharmacologic management of ascites. Ascites is treated by removing fluid with paracentesis or pharmacologically with diuretics. Treatment guidelines for ascites recommend a ratio of spironolactone 100 mg to furosemide 40 mg which is used to maximize fluid removal, maintain normokalemia, and minimize side effects. The goal of this research is to see if patients are receiving the recommended ratios of these medications or interpreting reasons for alternative management.

### Methods:

This study is a single-center retrospective chart review study approved by Southern Illinois University Edwardsville's institutional review board. Hospitalized patients between 18-89 years old who were at Springfield Memorial Hospital between 2018-2023 with documented ICD-10 codes for liver disease with ascites were included. Exclusion criteria includes admission to the hospital for <24 hours, death, or pursuing hospice care. Factors that could have impacted the diuretic dosage such as changes in weight at admission and discharge, potassium level, renal function, and blood pressure were analyzed. The primary outcome of this study was to identify if patients were given diuretics in a ratio of spironolactone 100mg: furosemide 40mg to manage their ascites. Data will be analyzed using descriptive statistics and correlation analysis.

### Results/Conclusion:

One hundred patients were included in this study of which 11 were Child-Pugh Class A, 52 were Class B, and 34 were Class C. Patients in Child-Pugh Class C statistically are more likely to receive the recommended diuretic ratio than those in Child-Pugh Class A (58.8% vs 18.2%,  $p=0.044$ ). This study also found there to be statistically significant between the spironolactone dose patients received in Child-Pugh Class A and Class C (31.8mg vs 82.4mg,  $p=0.005$ ). While this study provided more information about this patient population, more studies will be needed in the future with a larger and more diverse study population.