Title

Evaluation of Midodrine, Octreotide, and Albumin (MOA) Therapy and Outcomes in Patients with Hepatorenal Syndrome

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Abstract Form

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Research Category (please check one):

☒	**Original Research**	☐	**Clinical Vignette**	☐	**Quality Improvement**	☐	**Medical Education Innovation**

Abstract

Introduction: Hepatorenal syndrome (HRS) is a severe complication of cirrhosis caused by extreme circulatory dysfunction. Although terlipressin has been used outside of US and was recently FDA-approved, the main treatment of HRS is the combination of midodrine, octreotide, and albumin (MOA) due to cost consideration. However, albumin alone may be used to increase intravascular volume due to provider preference. The purpose of this study is to evaluate decline in renal function, length of stay (LOS), and mortality in patients who received MOA therapy compared to albumin alone.

Methods: This is a retrospective case-control evaluation of patients admitted to a Department of Health Services facility (Olive View-UCLA, Harbor-UCLA, LAC-USC) from 2016 to present. Patients were screened for enrollment using Cerner, our electronic health record. Inclusion criteria: patients ≥ 18 years with discharge diagnosis of advanced cirrhosis or HRS and who received MOA therapy (Cohort 1) or albumin alone (Cohort 2). Large volume paracentesis (>5L) and baseline renal disease patients were excluded. Data collection included cause of HRS, % change in serum creatinine from baseline, readmission, and need for nephrology consult. Unpaired t-tests (continuous) and chi-squared (categorical data) were used for analysis.

Results: Of 5702 patients screened, 482 met eligibility criteria (Cohort 1 N=94 and Cohort 2 N=388). There was no difference in baseline characteristics between the two cohorts. Approximately 20% (n=94) received MOA therapy whereas 81% (n=388) received albumin alone. MOA therapy in comparison to albumin alone had a longer LOS and a greater need for nephrology consultation (15 vs. 10 days, $p<0.0001$) (76% vs. 30%, $p<0.0001$), respectively. More patients on MOA therapy experienced worsening renal function compared to albumin (37% vs. 15%). However, the rate of readmission for MOA was 28% in comparison to 49% in albumin group ($p=0.0002$). Mortality was higher in the MOA vs albumin group (28% vs. 18%, $p=0.031$).

Conclusion: Among patients treated for HRS, MOA therapy resulted in an overall longer LOS, further decline in renal function, and mortality. However, it resulted in a lower readmission rate compared to the albumin alone group. Further data is needed to determine optimal drug therapy to delay the progression of HRS.