



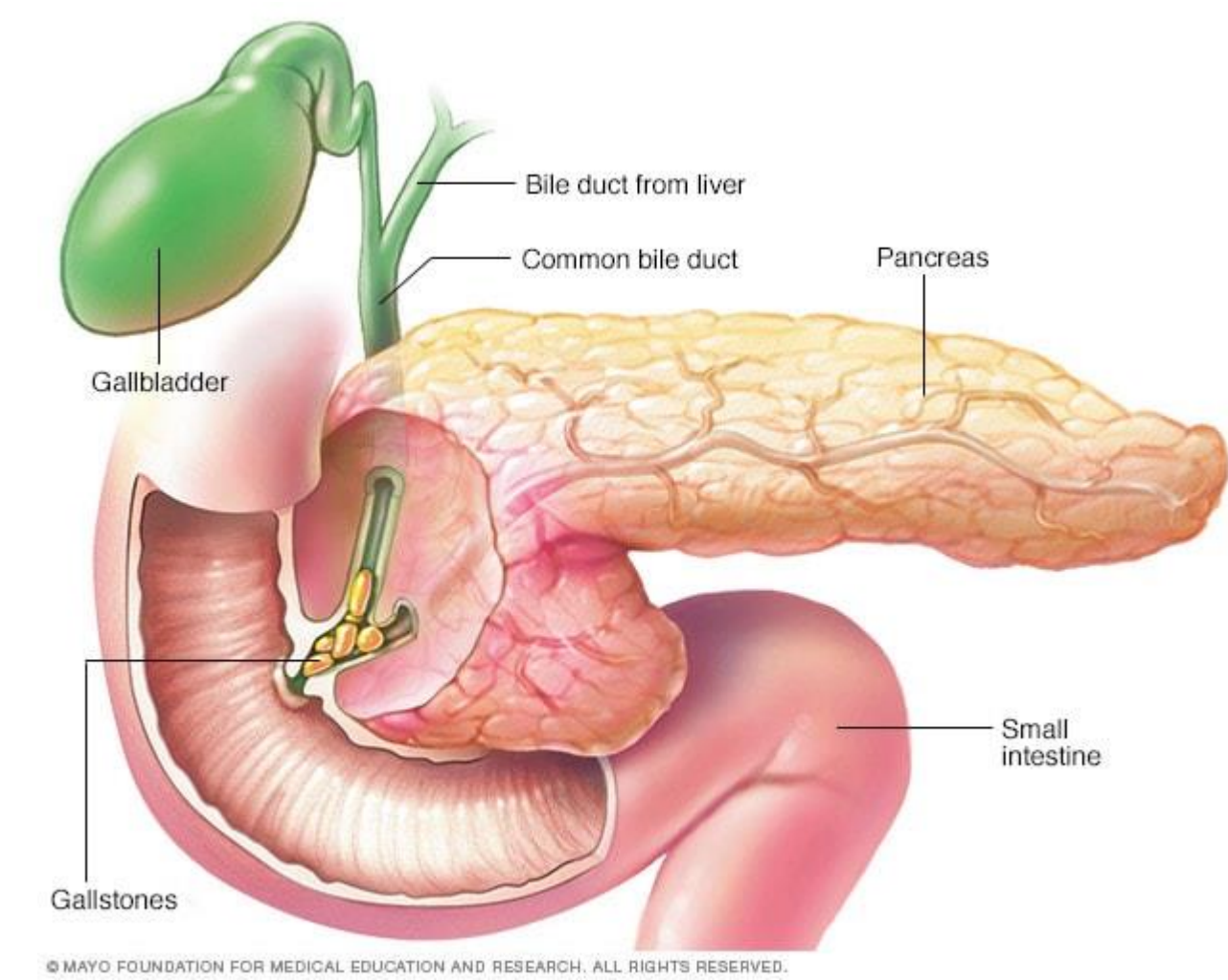
Presentation and management of fluid status for cirrhotic patients with acute pancreatitis in a prospective cohort study

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Background



- Literature regarding management of cirrhotic patients with acute pancreatitis is limited.
- Fluid resuscitation and volume of fluids administered to this population are critical given their sensitivity to hemodynamic changes.

Objective

To evaluate differences in fluid management of acute pancreatitis in cirrhotic versus non-cirrhotic patients and its impact on clinical outcomes.

Methods

- Analyzed unique patients presenting with acute pancreatitis to LAC+USC Medical Center from 2015-2021 who were captured in a prospective cohort.
- Patients were stratified by diagnosis of cirrhosis based on clinical exam, laboratory findings, and diagnostic findings.
- Volume of fluid administered over the first 24 hours were analyzed.
- Patients were assessed for development of moderately severe and severe pancreatitis as defined by the Revised Atlanta Criterion.
- Secondary outcomes analyzed included pre-existing volume overload, organ failure, ICU admission, mortality, and new volume overload.
- Linear and logistic regression analyses were performed, controlling for both patient (age, sex, ethnicity) and clinical (etiology of pancreatitis, comorbidities) factors.

Data

Figure 1. Fluids in First 24 Hours (p<0.1)

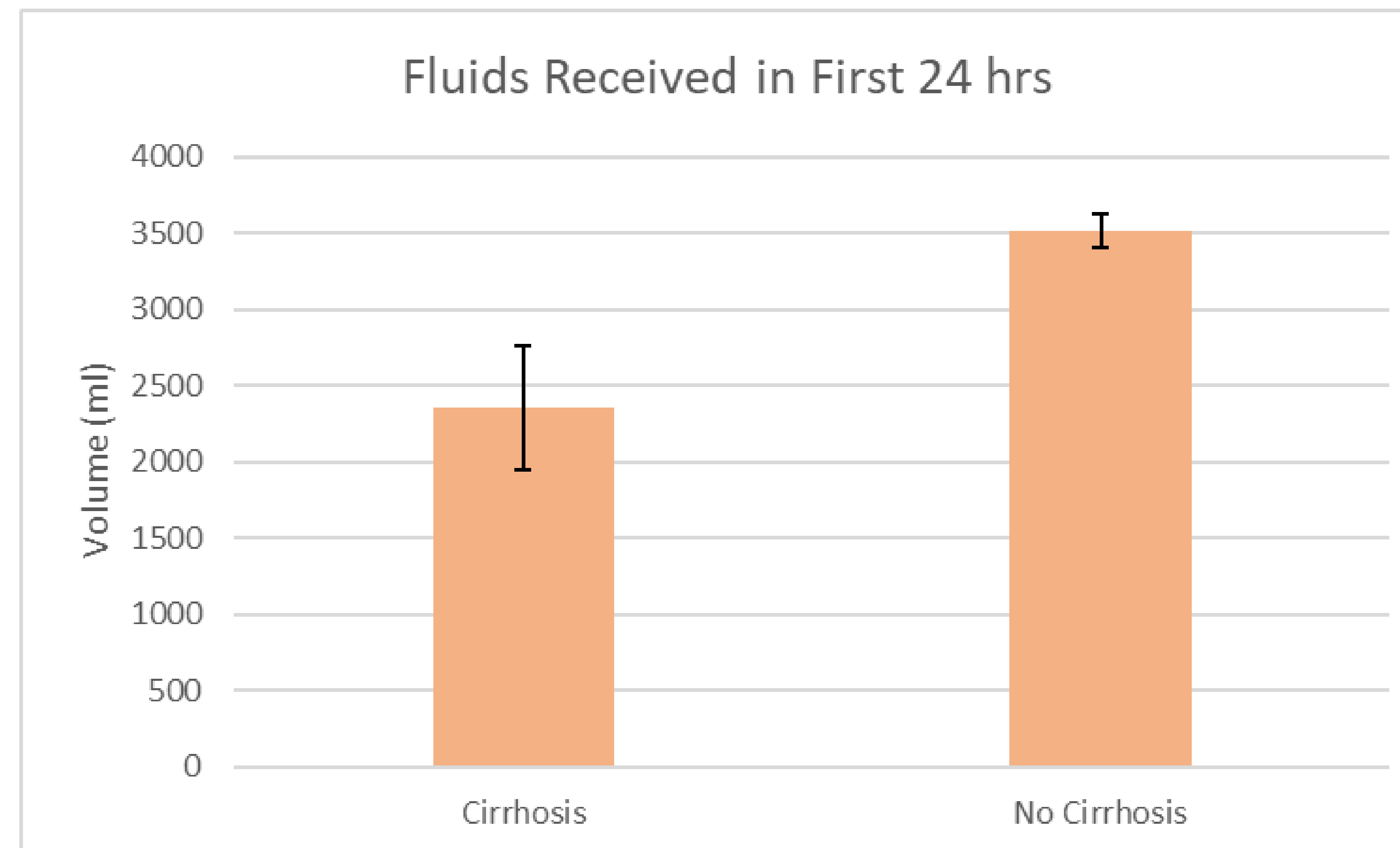


Table 1. Clinical Outcomes in Patients with Cirrhosis

Clinical Outcomes in Patients with Cirrhosis		
Outcome	OR (95% CI)	95% Confidence Interval
Volume Overload	18.52	9.17-37
New AKI	2.31	1.34-3.98
Severe Pancreatitis	2.75	1.37-5.56
Mortality	8.33	3.36-20.83
Dialysis Initiation	2.46	0.70-8.62
ICU Admission	1.33	0.74-2.38
Readmission	1.30	0.66-2.56

Results

- 1,433 patients presented to LAC+USC Medical Center with acute pancreatitis between 2015-2021.
- Of those patients, 87 (6.1%) patients had a diagnosis of cirrhosis.
- Patients with cirrhosis received less fluids in the first 24 hours compared to patients without cirrhosis (mean volume 2351.02 (1947.77-2755.24) ml vs 3512.33 (3398.03-3626.63) ml, p<.01). (Figure 1)
- In multivariate analysis, cirrhotic patients more likely presented with pre-existing volume overload (OR 18.52 95% CI 9.17-37.0).
- Cirrhotic patients were more likely to have new acute kidney injury (OR 2.31 95% CI 1.34-3.98), severe pancreatitis (OR 2.75, 95% CI 1.37-5.56), and mortality (OR 8.33 95% CI (3.36-20.83) during inpatient stay (Table 1).
- There were similar rates of local complications of pancreatitis and ICU admission.

Discussion

- Patients with cirrhosis were more likely to present with pre-existing volume overload and received less fluids than patients without.
- Despite their volume status, patients with cirrhosis were more likely to develop AKI, severe pancreatitis, and mortality.
- Our study highlights the higher morbidity and mortality of cirrhotic patients with acute pancreatitis and the challenges with managing their fluid status.
- Further research regarding fluid management in this hemodynamically complex population is warranted.

References

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3. Abushamma, Suha MD¹; Simons-Linares, Roberto C. MD²; Bhatt, Amit MD³; Romero-Marrero, Carlos MD⁴; Stevens, Tyler MD⁵; O'Shea, Robert MD⁶; Chahal, Prabhleen MD, FACP³ Clinical Outcomes of Acute Pancreatitis in Patients with Liver Cirrhosis - A Single-Center Experience, *American Journal of Gastroenterology*; October 2018 - Volume 113 - Issue - p 518