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Admission to Medicine or Surgery Service for Cholecystitis: A Retrospective Cohort Review

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INTRODUCTION

- Global incidence of acute cholecystitis: 6,300 per 100,000 under 50 and 20,900 per 100,000 over 50.
- Acute cholecystitis can be treated operatively, with cholecystectomy, or non operatively.
- We hypothesize that patients with acute cholecystitis admitted to a surgical service have shorter length of stay, lower total cost, and fewer readmissions when compared with those patients admitted to the medical service.

METHODS

- Retrospective cohort study from 2020-2023; patients at a tertiary care center.
- Inclusion:
  - **ICD-10 code of K80 for cholelithiasis and/or cholecystitis**.
- Exclusion:
  - Patients undergoing elective cholecystectomies excluded.
- The electronic medical record was queried for demographics, comorbidities, LOS, 30-day readmission, and hospital stay billing.
- Univariate and multivariate analysis was performed between the two groups.

RESULTS

2,454 patients during the study period; 43% of patients were admitted to the surgical service.



- Surgical patients had a shorter LOS (5.2 days vs. 7.3 p<0.001)



- $2,441.7 lower cost of admission (p<0.001)
- Lower readmission rate at 30 days (15.9 vs. 20.0%, p=0.010)



- A lower incident risk of readmission of 0.79 (95% CI 0.67-0.95, p=0.010) compared to medicine-admitted patients.



- However, patients admitted to surgical services had a lower grouped Charlson Comorbidity Index (p<0.001).

CONCLUSIONS

- Acute Cholecystitis can be safely managed by Medicine and Surgical admitting teams.
- However, admission to the surgical service is associated with a statistically significant:
  - **Reduced length of stay**
  - **Reduced total cost**
  - **Lower readmission rate**
- Based on these findings, we propose that all patients admitted with a primary diagnosis of acute cholecystitis be admitted to Surgery service.
- This study is limited by its design as a single center retrospective cohort study. Future directions include expanding investigation to multiple sites allowing for greater generalizability.

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