Predictors of 30-Day readmission with Clostridioides difficile after Liver Transplant Surgery

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- Liver transplantation (LT) is a definitive therapy of fulminant liver failure with promising outcomes.
- It is known to have readmission as a common postoperative complication.

PURPOSE

 We aim to study the readmissions after LT specific to Clostridioides difficile infection (CDI).

METHODS

- We used the National Readmission Database (NRD) for the year 2018 to identify adult patients readmitted within 30 days after an index admission for LT.
- All diagnoses and procedures were identified using ICD 10 codes.
- We identified 30-day readmission rate specific to CDI, mortality, healthcare related utilization resources and independent predictors of CDI specific readmission.
- We compared patient demographics, diseases, admission/discharge facility factors between those with and without readmission. Risk factors for CDI readmission were calculated using binary logistic regression.

RESULTS

- A total of 6,888 adult patients underwent LT between January and November 2018, and were alive at the time of discharge.
- 157 (2.3%) of them had CDI during the index hospitalization.
- The 30-day CDI-specific readmission rate was 1.34% (95 cases).
- Only 20% had CDI during index admission.
- CDI readmitted patients were relatively younger (mean age 53.6 vs 55.7 P< 0.05), more likely to have chronic renal failure (41.1% vs 26.1%, P< 0.05), but otherwise had similar comorbidities (congestive heart failure, obesity, diabetes and hypertension), and hospital characteristics (size, teaching status and location) compared to those without CDI specific readmission.





Risk of CDI specific readmission after Liver Transplant is low, but length of stay and renal failure seem to be important determinants.

Results Cont.

- They had similar Charlson comorbidity index (mean 6.7 vs 6.6). Patients with readmissions were more likely to be discharged with home health care (51.6% vs 39.3%, P< 0.05). Readmitted patients also had longer hospitalization (median length of stay 19 days vs 12 days).
- Independent predictors of 30-day readmission with CDI were LOS >14 days (OR 1.6), chronic renal failure (OR 1.8) and in-patient hemodialysis (OR 1.9).
- The total health-care in-hospital economic burden of CDI readmission was \$15.2 million in total charges and \$3.4 million in total costs. These readmissions accounted for 1,000 cumulative bed days.

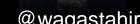
CONCLUSION

 Our data shows that following LT, the 30-day CDI specific readmission rate is low but certain factors like prolonged LOS, chronic kidney disease and dialysis requirement could help identify high risk patients.

References

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