Epidemiology of liver transplantation and post-LT complications in Germany: nationwide study (2005–2018)

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Abstract

Background

To date, liver transplantation (LT) is the only curative treatment for cirrhosis and early-diagnosed progressive acute liver failure (ALF). However, LT results in morbidities and mortality even post-LT. Different comorbidities may follow and further increase mortality and morbidity. In this study, we investigated the outcomes and their trends over a period of 14 years among hospitalized patients evaluated for LT, transplant and post-LT in Germany.

Methods

This German nationwide study investigated the number of admissions of patients hospitalized for evaluation of LT and post-LT on related comorbidities and complications between 2005 and 2018 based on the DRG system with ICD-10/OPS codes. 14 745 patients were put on the LT waiting list and 12 836 underwent LT during the observational period.

Results

The LT number decreased by 2.3% over time, while the waiting list mortality rate increased by 5%. By contrast, the in-hospital mortality rate decreased by 3%, especially in ALF patients (decrease of 16%). Interestingly, admissions of post-LT patients for complications almost doubled, driven mainly by complications of immunosuppression (tripled). Importantly, post-LT patients with acute kidney injury (20.2%) and biliodigestive anastomosis (18.4%) showed the highest in-hospital mortality rate of all complications.

Conclusion

In conclusion, the decrease in LT leads most probably to the increased in-hospital mortality of patients on the waiting list. Interestingly, in-hospital mortality decreased in LT patients. Post-LT comorbidities requiring hospitalization increased in the observational period and management of patients post-LT with AKI or biliodigestive anastomosis should be addressed.