

Hospital admission with liver cirrhosis has highest mortality rate of all chronic diseases

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Cirrhosis, a disease of the liver in which tissue becomes dysfunctional and scarred, is the final stage of most chronic liver diseases and the fourth most frequent cause of death in central Europe. However, until now hardly any current findings have been available on its epidemiological profile in Germany. For this reason, Prof. Jonel Trebicka and his team of researchers investigated the data sets from the

German Federal Statistical Office on the approx. 250 million hospital admissions taking place from 2005 to 2018 in Germany for any reason, and categorized them according to the Tenth Revision of the International Classification of Diseases (ICD-10). They found that 0.94 percent of these hospitalized patients had been diagnosed with cirrhosis of the liver, which in the majority of cases occurred as a comorbidity and not the primary disease. In absolute figures, admissions of patients with liver cirrhosis rose from 151,108 to 181,688 during the observation period.

The primary end point of the study was the mortality rate from liver [cirrhosis](#) in hospital. This did indeed exhibit a welcome fall from 11.57 percent to 9.49 percent during the investigation period, but it is still much higher than the respective rates for other chronic diseases such as cardiac insufficiency (8.4 percent), renal failure (6.4 percent) and chronic obstructive pulmonary disease (5.2 percent). In cases where liver cirrhosis was comorbid with another chronic disease, it increased that disease's mortality rate two to three fold; the greatest effect was observed with infectious respiratory diseases.

Thanks to the introduction of direct-acting antivirals to combat Hepatitis C, the proportion of HCV-related cirrhosis fell during the observation period to around one third. On the other hand, the frequency of cirrhosis caused by non-alcoholic fatty liver disease quadrupled during the same period, in parallel with a rise in the number of obese patients. However, despite these etiological trends, cirrhosis caused by alcohol abuse continues to dominate. It accounts for 52 percent of all cirrhoses in the study, and the absolute number is still rising.

Gastrointestinal bleeding is becoming increasingly rare as a complication of liver cirrhosis in hospital patients, presumably due to the treatment guidelines that continue to be applied in German hospitals, including endoscopic procedures or the administration of non-selective beta

blockers. By 2018, bleeding from oesophageal varices had shrunk to one tenth of its original level in 2005. On the other hand, deterioration of symptoms owing to ascites or hepatic encephalopathy caused by insufficient detoxification by the liver has increased. The number of portal vein thromboses doubled in parallel with the intensified use of imaging diagnostics.

The patients admitted with cirrhosis were much younger than those with other chronic diseases: half of them were under the age of 64. Higher hospitalization rates and in-hospital mortality rates were recorded in the eastern German states than in western Germany. Across the country, around two thirds of patients hospitalized with liver cirrhosis were men. Many of them died while in their fifties or younger, which explains the large number of disability-adjusted life years and the enormous socio-economic burden caused by liver cirrhosis, as men in this age group still account for the majority of the labor force.

"The results of our study show that the decision-makers and financing bodies in the health system should invest much more in the prevention of alcohol-related [liver](#) cirrhosis," Prof. Jonel Trebicka concludes. "They also point up how important it is to recognize and treat [liver cirrhosis](#) as a comorbidity of other [chronic diseases](#)."

More information: Wenyi Gu et al, Trends and the course of liver cirrhosis and its complications in Germany: Nationwide population-based study (2005 to 2018), *The Lancet Regional Health - Europe* (2021). [DOI: 10.1016/j.lanep.2021.100240](https://doi.org/10.1016/j.lanep.2021.100240)

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