NASH Is the Second Leading Indication for Liver Transplants

The profile of chronic liver disease has changed due to obesity trends and advances in the treatment of hepatitis C.

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Non-alcoholic steatohepatitis (NASH) is the second most common—and fastest-growing—indication for liver transplants in the United States, according to a study in Clinical Gastroenterology and Hepatology. Moreover, among women without hepatocellular carcinoma (HCC), NASH is already the leading reason for a liver transplant.

Changing trends in obesity and the development of better treatments for viral hepatitis have altered the picture of chronic liver disease in the United States. While vaccines can prevent hepatitis B and new treatments can cure hepatitis C, the prevalence of obesity and type 2 diabetes have shot up, increasing the risk of non-alcoholic fatty liver disease (NAFLD) and NASH, its more severe form.

Zobair Younossi, MD, MPH, of the Inova Health System in Falls Church, Virginia, and colleagues analyzed liver transplant data for people with chronic liver disease.

The team included information on adult recipients and those wait-listed for a transplant from the Scientific Registry of Transplant Recipients for the period 2002 to 2019. The analysis included those with chronic liver disease but excluded those with acute liver disease, drug-induced liver disease or no information on the type of liver condition.

The researchers assessed the proportions of various causes of chronic liver disease with or without HCC, the most common type of liver cancer, at the time of placement on the waiting list.

Based on their condition, the participants were arranged into eight groups:

- Chronic hepatitis B
- Chronic hepatitis C without chronic hep B or alcohol-related liver disease (ALD)
- ALD without chronic hep C
- ALD with chronic hep C

- NASH
- Autoimmune hepatitis
- Primary biliary cholangitis
- Primary sclerosing cholangitis.

Of the 194,698 adult liver transplant recipients during the study period, information about their liver condition was available for 168,441 people, who made up the final study population.

In 2002, chronic hep C (37%) and ALD (16%) were the leading indications for liver transplantation in people without HCC, with NASH present in only 5% of cases. Similarly, chronic hep C (58%) and ALD (10%) were the most common causes for people with HCC, with NASH present in only 1% of cases.

But by 2019, NASH (28%) became a leading cause—second only to ALD, which was present in 38% of cases—of liver transplantation in people without HCC. At the same time, NASH was the leading factor for liver transplants in 34% of women, 36% of individuals older than 54 and 41% of those on Medicare.

Among people with HCC, NASH (24%) is now the second most common indication for a liver transplant, surpassing ALD (16%) and following chronic hep C, which was present in 40% of cases. While hep C as a cause has speedily declined, NASH has rapidly risen as an indication. “Therefore, focused research and interventions are needed to increase NAFLD awareness, the type of diet and exercise that support weight loss required to reverse liver steatosis and how to best identify high risk patients,” wrote the study authors.

Click here to read the study abstract in Clinical Gastroenterology and Hepatology.

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