When most people think of cirrhosis, the first organ that comes to mind is the liver. However, hepatic encephalopathy can be described as a disorder caused by severe liver disease that impacts the nervous system, and ultimately, the brain.

"Hepatic encephalopathy generally occurs in patients with chronic liver disease," said Elliot Tapper, M.D., a hepatologist and associate professor of internal medicine at Michigan Medicine.

"Toxins build up in the blood stream because the liver isn't able to fully function as a filtration system. These toxins then move to the brain and impact its abilities. Ultimately, the condition can cause changes in mood and confusion, as well as excessive sleepiness and physical falls. In worst case scenarios, it can even lead to coma."

Tapper adds that once an individual is diagnosed with hepatic encephalopathy, they almost always need to be hospitalized.

"While the term hepatic encephalopathy is used to describe the brain dysfunction associated with cirrhosis, that only captures one part of it," he said. "I really hate this condition and what it does to my patients."

However, Tapper notes that individuals with the condition can undergo two main treatments.

"The first treatment is lactulose, which is a synthetic sugar that can reduce toxins, like ammonia, in the blood of patients with cirrhosis," he said. "But if episodes of hepatic encephalopathy continue while on lactulose, rifaximin is recommended. Rifaximin, when added to lactulose, is associated with powerful reductions in symptoms of the condition, as well as hospitalization and possibly death."

In addition, Tapper notes that previous studies have shown that Black patients with hepatic encephalopathy were hospitalized more often than their peers in other racial and ethnic groups.

These notions inspired Tapper to team up with other experts including Neehar Parikh, M.D., M.S., a liver specialist and assistant professor at Michigan Medicine, Nneka Ufere, M.D., a transplant hepatologist at Massachusetts General Hospital and Utibe Essien, M.D., M.P.H., an assistant professor of medicine at the University of Pittsburgh School of Medicine. They sought to examine the racial and ethnic disparities associated with rifaximin use for individuals with hepatic encephalopathy.
encephalopathy. Their research was recently published in the Journal of Hepatology.

"From the moment I saw the term 'pharmacoequity,' which was coined by Dr. Essien in JAMA, I knew that we had to collaborate on this study regarding the equity of rifaximin use," said Tapper. "It should also be noted that rifaximin is unique in hepatology as one of the only expensive, non-generic drugs we use."

Essien echoes Tapper's thoughts on collaboration, adding, "This is exactly the type of research we were hoping to see the term applied to. This study was not only designed to potentially reveal opportunities in the improvement of care for patients with hepatic encephalopathy, but also, to help ensure equitable access to novel, guideline-established, life-saving therapies for all, whatever the condition may be."

The team examined data from United States Medicare enrollees that were diagnosed with cirrhosis and had prescription drug coverage from 2011 to 2019.

"Sadly," Tapper added, "our data revealed several disparities in rifaximin use that to me, definitely represents a wakeup call. We found that Black and Hispanic patients were the least likely to be prescribed rifaximin when compared to their white counterparts. They also received fewer rifaximin refills, spent more money on the drug and even had less access to subspecialists who were familiar with its use."

Ufere notes how important this type of research is when it comes to combating inequities within health care.

"Addressing health disparities requires a deep investigation around the impact of the social determinants of health on access to care. Our paper highlights the effects of medication costs on access to evidence-based medical treatments for patients with cirrhosis. It also underscores the urgent need for hepatology practices, health care systems and policymakers to directly address the financial burdens within this population to advance health equity in cirrhosis care."


Provided by University of Michigan
APA citation: Racial and ethnic disparities exist in prescribing rifaximin for patients with hepatic encephalopathy (2022, March 30) retrieved 5 April 2022 from

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.