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More than half of liver patients experience neurocognitive impairments

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More than half of patients who have cirrhosis of the liver also display neurocognitive impairments such as short term memory loss, a study led by a Loyola University Health System researcher has found.

Loyola neuropsychologist Christopher Randolph, PhD, and colleagues found that 54 percent of 301 cirrhosis patients who were tested scored below the 10th percentile for their age and education on a test that measures neurocognitive abilities.

"Neurocognitive impairment is a major issue in patients with liver disease," Randolph said. "This can affect patients' ability to do everyday tasks such as working, driving or managing their finances."

Randolph reported results May 3 during the Digestive Disease Week meeting of physicians and researchers in New Orleans. Randolph is a clinical professor in the Department of Neurology at Loyola University Chicago Stritch School of Medicine.

Neurocognitive impairment in liver patients is called hepatic encephalopathy. It is believed to be caused by toxins such as ammonia that diseased livers do not clear from the body. Randolph's study is the first to document how liver patients compare with the general population.

Liver patients from multiple centers nationwide were given a test developed by Randolph called the Repeatable Battery for the Assessment

of Neuropsychological Status (RBANS™). The widely used paper-and-pencil test takes 20 to 25 minutes and measures memory, attention, language and visual-spatial functions. It includes tasks such as identifying line drawings of common objects, repeating lists of digits, copying geometrical figures and recalling a story.

In the general population, the average score on RBANS tests is 100. Among liver patients in Randolph's study who had neurocognitive impairments, the average score was 74. This is lower than the average score of patients with early-stage Alzheimer's disease.

Prevalence of neurocognitive impairment was independent of age, gender, educational level or severity of the underlying disease.

The findings are a subset of a larger study to determine whether an experimental compound called AST-120 benefits liver patients who have neurocognitive impairments. AST-120 absorbs ammonia and other toxins. Patients have been randomly assigned to receive AST-120 or a placebo.

Provided by Loyola University Health System

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