Fighting Malnutrition in Liver Cirrhosis Patients

The liver plays a crucial role in nutrient absorption. So it’s no surprise that patients with liver disease can lose that function, leading to malnutrition and additional complications. To make matters worse, malnutrition in these patients can be difficult to diagnose and prevent.

Dr. Paul Martin

“Because they retain fluid due to their liver disease, their weight may be normal, but in fact, they’ve lost a considerable amount of muscle mass,” said Paul Martin, M.D., chief of the Division of Gastroenterology and Hepatology at the University of Miami Miller School of Medicine. “This is debilitating and makes it harder for them to undergo major procedures, including liver transplantation.”

To help improve patient care, researchers at the Miller School have written a paper that describes the impact of liver cirrhosis on nutrition. Published in the journal Gastroenterology & Hepatology, the review consolidates clinical information to help clinicians diagnose and treat malnutrition in their cirrhosis patients.

From an epidemiological standpoint, liver cirrhosis presents a good news/bad news scenario. New drugs can now cure one of the main causes, hepatitis C. Unfortunately, cirrhosis from alcohol or obesity is on the rise. Many people may have fatty liver disease without even knowing it.
“Fatty liver is asymptomatic until it’s not,” said Michelle Pearlman, M.D., assistant professor in the Division of Gastroenterology and Hepatology. “People often don’t realize they have fatty liver until they develop decompensated liver disease. Patients otherwise feel fine, though they may have high cholesterol and blood pressure. Suddenly, they have advanced liver disease.”

Even after developing cirrhosis, the nutritional ramifications may not be obvious. Many patients are overweight, and one possible cirrhosis side effect is ascites – fluid buildup around the gut. Taking weight and height measurements may not accurately assess the problem.

“Even though someone is overweight or obese, they can be malnourished, particularly in patients with decompensated liver disease,” said Dr. Pearlman. “Because of alterations in bile acids and medications, they can often have vitamin and mineral deficiencies.”

In addition to muscle wasting from reduced protein, patients can experience a variety of side effects. Vitamin A deficiencies can lead to blindness. Thymine deficiencies can cause irreversible dementia.

Rather than simply looking at a patient’s body mass index, Drs. Martin and Pearlman and co-author Fernando Calmet, M.D., a former fellow in the department, suggest that providers pay close attention to cirrhosis risk factors, such as diabetes, high blood pressure and/or cholesterol, and large waist
circumference. After assessing these factors, clinicians can go to the next step, ordering enzyme tests or an ultrasound.

If a patient has lost muscle mass, they may not be a candidate for potentially life-saving surgery. Still, getting them to eat the right foods is not always easy.

“A lot of factors that come along with liver disease make people not want to eat,” said Dr. Pearlman. “And what they do eat may not be the most nutrient-dense, high protein foods.”

The Miller School relies on dietitians in its outpatient liver clinic to help patients improve their food choices and exercise regimens, though this level of expertise is relatively rare. While hospitals have inpatient dietitians, insurance generally does not cover them for outpatient cirrhosis treatment and few facilities have the necessary resources.

Drs. Martin and Pearlman hope their paper will help cirrhosis patients get diagnosed earlier. In addition, they look forward to continuing research to help clinicians develop more personalized dietary and exercise plans.

“Dietitians may be able to mitigate some issues, and get them on programs to maintain muscle mass,” said Dr. Martin. “By making patients more nutritionally robust, there’s emerging evidence we can improve outcomes for liver disease.”