

Malnutrition Underestimated in Liver Disease

BY KATE JOHNSON
Montreal Bureau

MONTREAL — The extent of malnutrition is frequently underestimated in patients with chronic liver disease who are awaiting transplant, and would be better assessed with indirect calorimetry rather than traditional tools, Lynne MacArthur reported at the Canadian Digestive Diseases Week.

Presurgical malnutrition has a negative impact on survival and is associated with complications such as increased risk of systemic infection and encephalopathy, but the malnutrition is reversible when detected, noted Ms. MacArthur, a dietician at the London (Ont.) Health Sciences Centre.

Malnutrition has been found to be present in up to 90% of patients with advanced liver disease, so if the patients are listed for transplant, “they are likely malnourished,” she said at the meeting, which was sponsored by the Canadian Association of Gastroenterology.

Traditional tools for measuring malnutrition, such as the Harris Benedict Equation (HBE), are not useful in patients with liver disease

Presurgical malnutrition has a negative impact on survival and is associated with complications, but the malnutrition is reversible when detected.

“because markers like body weight and biochemistry don’t quantify malnutrition and are not accurate” in these patients, Ms. MacArthur said.

Specifically, “a predictive equation like [the] Harris Benedict Equation is of limited use in chronic liver disease because it often underestimates the resting energy expenditure,” she explained.

Resting energy expenditure is the absolute minimum energy needed for survival, not including energy required for exercise, thermogenesis, or weight gain, she said.

Patients with liver disease are often hypermetabolic, which increases their resting energy expenditure.

In addition, the surgical stress factor, which is known to raise energy requirements by as much as 50% in other transplant patients, has not been quantified adequately in cirrhosis and chronic liver disease patients, she said.

Indirect calorimetry can measure actual resting energy expenditure in the individual patient by using inspired oxygen and expired carbon dioxide. Her study compared actual resting energy expenditure, measured by indirect calorimetry, to the predicted resting energy expenditure according to HBE in 19 patients with chronic liver disease awaiting transplant. For the indirect calorimetry measurement, patients lay supine for 15 minutes with a steady exchange of oxygen and carbon dioxide.

“HBE consistently underestimated metabolic needs in all but two patients,”

Ms. MacArthur reported. “Patients’ actual energy needs were much more impressive with measured energy expenditure, and predicted energy expenditure didn’t capture the true inpatient variability.”

In 69% of patients with hypermetabolism, defined as measured energy expenditure greater than 110% of that predicted by HBE, “the energy requirements were grossly underestimated,” she said. Measured energy expenditure was much higher than that predicted by HBE.

In addition, measured energy expenditure did not appear to correlate with disease severity, she noted.

The study estimated that when indirect calorimetry is not available, increasing nutritional intake by 27% over energy needs as predicted by HBE would adjust for the surgical stress factor and malnutrition in patients with chronic liver disease awaiting transplant.

Such adjustments at the London Health Sciences Centre have led to sig-

nificant improvements in nutritional status among liver transplant candidates. “We’ve seen them gain weight and muscle, usually with enteral nutrition,” Ms. MacArthur said in an interview.

“We give outpatients tube feeds and have also seen improvement. When they feed themselves, typically they don’t get to 100% of their needs. They’re not hungry, they’re full because of the ascites, and they may be encephalopathic—sleeping all day and not eating,” she added. ■



GAIN
2 NEW STRENGTHS



Introducing OXYCODONE HCl
10 mg and 20 mg Tablets

Exclusively from ETHEX

OXYCODONE HCl ®



For more information
log on to www.ethex.com
or call 1-888-567-9176.

The strength of flexible dosing