

Protein energy malnutrition predicts complications in liver cirrhosis.

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Abstract

BACKGROUND:

Protein energy malnutrition frequently occurs in liver cirrhosis. Hand-grip strength according to Jamar is most reliable to predict protein energy malnutrition. We aimed to determine whether protein energy malnutrition affects complication risk.

METHODS:

In 84 cirrhotics, baseline nutritional state was determined and subsequent complications prospectively assessed. Influence of potentially relevant factors including malnutrition (by Jamar hand-grip strength) on complication rates were evaluated with univariate analysis. Effect of malnutrition was subsequently evaluated by multivariate logistic regression with adjustment for possible confounders.

RESULTS:

Underlying causes of cirrhosis were viral hepatitis in 31%, alcohol in 26%, and other in 43%. Baseline Child-Pugh (CP) class was A, B, or C in 58, 35, and 7%, respectively. Energy and protein intake decreased significantly with increasing CP class, with shift from proteins to carbohydrates. At baseline, according to Jamar hand-grip strength, malnutrition occurred in 67% (n=56). Malnutrition was associated with older age and higher CP class (CP class A 57%, B 79%, C 100%) but not with underlying disease or comorbidity. Complications occurred in 18 and 48% in well-nourished and malnourished patients, respectively, (P=0.007) during 13 ± 6 months follow-up. In multivariate analysis, malnutrition was an independent predictor of complications, after correcting for comorbidity, age, and CP score (adjusted odds ratio 4.230; 95% confidence interval 1.090-16.422; P=0.037). In univariate analysis, mortality (4 vs. 18%; P=0.1) tended to be worse in malnourished patients, but this trend was lost in multivariate analysis.

CONCLUSION:

Malnutrition is an independent predictor of complications in cirrhosis.

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