Examination of small bowel enzymes in chronic diarrhea.

Intestinal and Colonic Diseases

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Abstract:
Background: In Indonesia, the proportion of daily carbohydrate intake is approximately 60-80%. A number of small bowel disorders can result in the impairment of absorption and enzyme deficiency. Chronic diarrhea is common in Indonesia.

Methods: Thirty-four functional dyspeptic patients with an endoscopically normal small bowel as a control group, and 17 chronic diarrhea patients from the Division of Gastroenterology, University of Indonesia/Cipto Mangunkusumo Hospital were included in this study. All patients underwent a gastroduodenojejunoscopy and an ileocolonoscopy examination. Biopsies were taken from the jejunum (two specimens) and the biopsy specimens were examined for enzyme analysis (lactase, maltase, sucrase). The data were analyzed by using the Kruskal-Wallis or ANOVA.

Results: The lactase level of the chronic diarrhea group was significantly lower compared with that of the control group (1.941 +/- 1.621 vs 2.502 +/- 2.098 [mu]mol/min mg protein; P < 0.001). The maltase level of the chronic diarrhea group was significantly lower compared with that of the control group (280.942 +/- 148.173 vs 371.920 +/- 250.177 [mu]mol/min mg protein; P < 0.001). The sucrase level of the chronic diarrhea group was significantly lower compared with that of the control group (48.474 +/- 28.553 vs 66.727 +/- 49.685 [mu]mol/min mg protein; P < 0.001).

Conclusion: The enzyme activity concentrations (lactase, maltase, sucrase) were much lower in chronic diarrhea cases compared with the controls.

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