

VEGETARIAN DIET ALTERS THE ASSESSMENT OF EXOCRINE PANCREATIC FUNCTION

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The aim of the present study was the influence of vegetarian diet on the specificity of fecal tests in the assessment of exocrine pancreatic function. Material & methods: 96 healthy vegetarian and 105 non-vegetarian healthy subjects were studied. Vegetarians were divided into two subgroups: vegans (diet based exclusively on fruits and vegetables) and others (lactovegetarians and lactoovovegetarians). The duration of the diet ranged from 1 to 12 years. In all subjects, fecal elastase-1 (E1) concentrations and fecal chymotrypsin (ChT) activities were measured. In addition, in 20 vegetarians daily output of fecal enzymes was assessed and compared to that in 20 healthy subjects. Results: All results are expressed as mean±SEM. Both E1 concentrations (474±34 vs. 753±39 µg/g) and ChT activities (14.1±1.0 vs 19.4±0.9 U/g) were significantly lower in vegetarians than in non-vegetarian subjects (p<0.001). A decreased specificity for both tests was found in vegetarians (80.2 vs. 98.1% and 79.2 vs. 92.4%, respectively). E1 concentrations and ChT activities were lower in vegans than in the other vegetarians, but the difference was not statistically significant. No correlation between fecal enzyme concentrations and duration of the diet in vegetarians was found. Fecal enzyme output in vegetarians, although lower, was not statistically different from that observed in healthy subjects. However, stool weight was significantly higher (p<0.015) in vegetarians than in healthy subjects (137.4±14.1 g/day vs. 87.4±12.0 g/day). In conclusion, the specificity of fecal tests in the assessment of exocrine pancreatic function in vegetarians is reduced.