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Fecal Elastase-1 Is Useful in the Detection of Steatorrhea in Patients with Pancreatic Diseases But Not After Pancreatic Resection

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Context The measurement of steatorrhea in pancreatic disorders is complex and has limited diagnostic role. Fecal elastase-1 (FE-1) has been suggested as a simpler alternative to evaluate pancreatic insufficiency, but its diagnostic performance has never been compared with steatorrhea in patients with chronic pancreatitis or after pancreatic resection. **Methods**. The relationship between steatorrhea and FE-1 was studied in patients with suspected of malabsorption due to chronic pancreatic disorders or pancreatic resection. Analysis of variance (ANOVA) was used for statistical analysis, accepting a P value of 0.05 as limit for significance. **Results** Eighty-two patients were studied (42 non operated; 40 previously submitted to pancreatic resection). Fat output was pathological in 50, and more severe in operated than non-operated patients (29.2±3.1 *vs*. 9.9±2.2 g/day, P<0.001). FE-1 was consistent with exocrine impairment in 58 (severe 50, moderate 8), which was significantly more severe in operated patients. The relationship between FE-1 and steatorrhea was described by a power regression model (Figure 1), with a regression line significantly different in operated and non operated patients (P<0.001). A steatorrhea of 7 g (upper limit of reference range) was calculated by this regression when FE-1 was 15 µg/g in non-operated, but as high as 225 µg/g in operated patients. **Conclusion** FE-1 is useful to identify pancreatic insufficiency. Steatorrhea is anticipated in non operated patients only when FE-1 is below the limit for a confident measurement of our assay. In operated patients, steatorrhea may be present even if FE-1 is only slightly reduced, to confirm a role for non pancreatic factors.

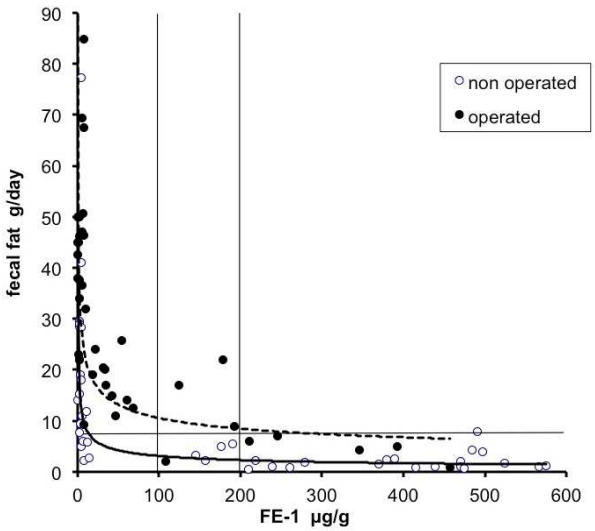

Figura 1. Relationship between FE-1 and steatorrhea