primary studies - published, non RCT

The assay of chymotrypsin in stool as a simple and effective test of exocrine pancreatic activity in cystic fibrosis.

Code: PM3387419 **Year:** 1988 **Date:** 1988 **Author:** Girella E

Participants

The assay was performed on 101 control subjects and 128 cystic fibrosis (CF) patients by the first method, and 75 controls and 102 CF patients by the second method. CF subjects were subdivided into four groups based on pancreatic function: total pancreatic insufficiency in the first group, partial pancreatic insufficiency in the second group, normal pancreatic function in the third group, and pancreatic insufficiency plus enzymatic treatment in the fourth group.

Interventions

Fifty-four CF patients were examined in the first group, 27 in the second group, 19 in the third group, and 28 in the fourth group by the titrimetric method; 23, 25, 50, and 65, respectively by the spectrophotometric method.

Outcome measures

reproducibility, sensitivity and specificity

Main results

The spectrophotometric method was highly reproducible and more sensitive and specific. With such a method the assay on stool random sampling correlated with the duodenal output of chymotrypsin after hormonal stimulation as well as fecal output of 72 h. The test had sensitivity and specificity of 100% if referred to CF patients with total pancreatic insufficiency. It was calculated that CF patients with normal fecal chymotrypsin have a probability of 76% to have a normal pancreatic function and a probability of 24% to have a partially compromised pancreatic function. The assay separates distinctly CF patients with a fat absorption coefficient greater than 90% from those with a coefficient less than 90%.

Authors' conclusions

The test is proposed for current clinical use in diagnosis and treatment of pancreatic insufficiency in cystic fibrosis.

http://www.mrw.interscience.wiley.com/cochrane/clcentral/articles/494/CN-00054494/frame.html

See also

Pancreas. 1988;3(3):254-62.

Keywords

Adolescent; Adult; Child; Gastrointestinal Diseases; Infant; pharmacological_intervention; Pancreas insufficiency; Pancreatic Diseases; Pancreatic Enzyme Replacement Therapy; Supplementation; Malabsorption; Nutrition Disorders; Gastrointestinal Agents;