primary studies - published RCT

Evaluation of the 13C-triolein breath test for fat malabsorption in adult patients with cystic fibrosis.

Code: PM15012784 **Year:** 2004 **Date:** 2004 **Author:** Ritz MA

Study design (if review, criteria of inclusion for studies)

RCT

Participants

6 adult CF patients both with and without pancreatic enzyme replacement therapy (PERT). Studies were also performed in 8 healthy volunteers

Interventions

Subjects drank 50 mL of a liquid meal mixed with 200 microL 13C-triolein and breath samples were collected by blowing through a straw into collection tubes every 30 min for 6 h.

Outcome measures

13CO2 recovery after an overnight fast in patients with CF in the usual dose for a light snack, in a randomized order, on different days. Studies were also performed in healthy volunteers after oral ingestion. The effect of gastric emptying was assessed by comparison of oral ingestion with intraduodenal infusion. Intra-individual variability was assessed in volunteers by repeating the breath test after drinking the test meal on a separate day

Main results

Compared with healthy subjects there was virtually no recovery of 13CO2 in CF patients without PERT. The median (interquartile range) cumulative percentage dose recovery (cPDR) at 6 h was 3% (0-8) in CF patients compared with 28% (22-41) in healthy controls (P

Authors' conclusions

The 13C-triolein breath test is a simple and reproducible method to measure fat malabsorption. The test provides a screening technique for fat malabsorption in adult CF patients and may be useful for monitoring the lowest effective dose of PERT.

http://dx.doi.org/10.1111/j.1440-1746.2003.03310.x

See also

J Gastroenterol Hepatol. 2004 Apr;19(4):448-53.

Keywords

Adult; Food; Malabsorption; Nutrition Disorders; Oral; Pancreatic Enzyme Replacement Therapy; Supplementation; Pancreas insufficiency; Pancreatic Diseases; Gastrointestinal Diseases; pharmacological_intervention; Gastrointestinal Agents;