primary studies - published RCT

Effect of glucose to fat ratio on energy substrate disposal in children with cystic fibrosis fed enterally.

Code: PM10601537 **Year:** 1999 **Date:** 1999 **Author:** Gottrand F

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

RCT crossover

Participants

8 (6-19 year old) CF patients fed enterally 130% RDA

Interventions

patients received for 1 month and in a random order isocaloric (1000 kcal/m(2)), isonitrogenous enteral diet with a normal fat and a high fat content (40% and 67% of non-protein energy intake).

Outcome measures

Substrate oxidation and net balance were estimated using indirect calorimetry at the end of each study period.

Main results

Overnight high fat enteral infusion resulted in no significant change in VCO(2)and VO(2)but lowered RQ (0.84 +/- 0.01 vs 0.88 +/- 0.01, P= 0.02) and non-protein RQ (0.83 +/- 0.01 vs 0.88 +/- 0.01). In spite of a higher glucose oxidation rate (8.1 +/- 0.5 vs 6.3 +/- 0.5 g. h(-1), P= 0.04), glucose net balance was significantly higher during normal fat formula administration (+2.5 +/- 0.8 v -0.3 7plusmn; 0.7 g/h, P

Authors' conclusions

The present study failed to show any benefit of a high fat diet on VCO(2)in non oxygenodependant cystic fibrosis children and adolescents fed slightly above RAD. Normal fat enteral formula led to higher glycogen repletion.

http://dx.doi.org/10.1016/S0261-5614(98)80027-7

See also

Clin Nutr. 1999 Oct;18(5):297-300.

Keywords

Adolescent; Adult; Caloric Intake; Child; Enteral Nutrition; non pharmacological intervention - diet; Supplementation;