primary studies - published RCT

Insulin and glucose excursion following premeal insulin lispro or repaglinide in cystic fibrosis-related diabetes.

Code: PM11574430 **Year:** 2001 **Date:** 2001 **Author:** Moran A

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

randomized trial

Participants

7 patients with CFRD

Interventions

patients with CFRD were fed 1,000-kcal liquid mixed meals. Three study conditions were administered in random order on separate mornings: 1) no premeal diabetes medication, 2) insulin lispro, 0.1 unit/kg body wt premeal and 3) repaglinide 1 mg premeal.

Outcome measures

Glucose and insulin levels were measured every 20 min for 5 h.

Main results

Fasting insulin and glucose levels were normal in patients with CFRD, but the peak glucose level was elevated. Insulin lispro significantly decreased the peak glucose level (P = 0.0004) and the 2-h (P = 0.001) and 5-h (P

Authors' conclusions

In response to subcutaneous insulin lispro, postprandial glucose excursion was significantly diminished and insulin secretion was enhanced compared with a control meal in which no medication was given to patients with CFRD. The oral agent repaglinide resulted in lesser corrections in these parameters. Neither drug completely normalized glucose or insulin levels, suggesting that the doses chosen for this study were suboptimal. Placebo-controlled longitudinal studies comparing the effectiveness of repaglinide and insulin on glucose metabolic control as well as overall nutrition and body weight are needed to help determine optimal medical treatment of CFRD.

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See also

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Keywords

Hypoglycemic Agents; Insulin; pharmacological_intervention; Pancreatic Diseases; Gastrointestinal Diseases;