primary studies - published RCT

Pharmacokinetics of famotidine in patients with cystic fibrosis.

Code: PM9824781 **Year:** 1998 **Date:** 1998 **Author:** Maish WA

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

RCT, cross-over design

Participants

13 patients with severe cystic fibrosis (CF) ranging from 10 to 47 years of age and 25 to 72 kg in weight. 12 patients were crossed over to the alternate treatment.

Interventions

Patients were randomized to first receive famotidine either 20 mg intravenously or 40 mg orally.

Outcome measures

Repeated blood samples were obtained over 12 hours after intravenous and oral administration and urine was collected over 24 hours for quantitation of famotidine by means of high-performance liquid chromatography (HPLC). A compartment model-dependent approach was used to characterize the disposition of famotidine.

Main results

From the intravenous data, the mean +/- standard deviation elimination half-life (t1/2) was 2.11 +/- 0.75 hours, the total clearance (Cl) was 0.79 +/- 0.41 L/kg/hr, the renal clearance was 0.57 +/- 0.26 L/kg/hr, the fraction eliminated unchanged in the urine was 83% +/- 16%, and the apparent volume of distribution (Vdss) was 1.33 +/- 0.53 L/kg. The bioavailability determined from comparison of intravenous and oral area under the curve data was 71% +/- 27%.

Authors' conclusions

Results of this study support an initial famotidine dose of 20 mg intravenously or 40 mg orally every 12 hours in patients with CF who are older than 9 years of age.

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See also

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Keywords

Adolescent; Adult; Child; Famotidine; Gastrointestinal Agents; Histamine H2 Antagonists; Intravenous; Oral; pharmacological_intervention;