ENERGY INTAKE, GASTRIC EMPTYING AND CLINICAL STATUS IN CYSTIC FIBROSIS

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Cystic fibrosis (CF) is the most common genetically inherited disease in caucasians. It is a terminal disease with death usually resulting from severe lung disease and malnutrition. Poor appetite is a well recognised feature of CF. The possibility of delayed gastric emptying times contributing to reduced energy intake has been examined.

The study is a cross-sectional measurement of energy intakes, clinical status, faecal fat excretion and gastric emptying times in the John Hunter Hospital CF clinic population. 13 subjects with CF, mean age 11.7 years (eight female and five males) were studied. Energy intake was assessed using a four-day weighed food record. Clinical status was assessed using the Shwachman score and faecal fat excretion determined from a three-day stool collection analysed by the method of van der Kamer. Gastric emptying was assessed using a standard test meal of pancakes labelled with 99 Tcm-macroalbumin aggregates. The half emptying time of solids in the stomach was recorded.

Multiple regression analysis was used to assess the contribution of gastric emptying time, clinical status, faecal fat excretion and presence of a gastrostomy to the variability in energy intake. These factors together accounted for 79% ($P<0.002$) of the variability in energy intake. In this model gastrostomy ($P<0.002$) and Shwachman score ($P<0.004$) had the highest significance levels.

In conclusion, faecal fat excretion, Shwachman score and a gastrostomy are all important factors which directly influence energy intake in cystic fibrosis.

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