primary studies - published RCT

Nutritional status of patients with cystic fibrosis with meconium ileus: a comparison with patients without meconium ileus and diagnosed early through neonatal screening.

Code: PM10617704 **Year:** 2000 **Date:** 2000 **Author:** Lai HC

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

extension of a randomized clinical investigation of neonatal screening for cystic fibrosis (CF)

Participants

CF patients with meconium ileus (MI) (n=32); CF patients without MI (n=50)

Outcome measures

Nutritional status was evaluated from early infancy to 13 years of age based on anthropometric, biochemical, and dietary assessments.

Main results

MI patients were smaller at birth (3117 g compared with 3413 g) and were shorter (22nd percentile compared with 48th percentile) and thinner (24th percentile compared with 49th percentile) compared with non-MI early diagnosed patients up to 13 years of age. Poor growth was particularly evident in 26 MI patients who required surgery for MI (height and weight at the 20th percentile), whereas those treated without surgery (n = 6) showed better height (45th percentile) and weight (37th percentile). Abnormal essential fatty acid profiles were significantly more prevalent in MI compared with non-MI early-diagnosed patients before 3 years of age. Daily intakes of calorie (130% compared with 111% recommended dietary allowances) and protein (339% compared with 279% recommended dietary allowances) were higher but the percentage of fat (37% compared with 38%) and linoleic acid (4.5% compared with 4.7%) in the diet were similar between the two groups.

Authors' conclusions

These results demonstrated a clear association of MI with malnutrition in CF. The observed poor growth among our MI patients was not because of poor dietary intakes, but was related to surgical treatment for MI and poor essential fatty acid status. These findings present new challenges regarding the optimal medical treatment and nutritional intervention for CF patients with MI.

http://www.mrw.interscience.wiley.com/cochrane/clcentral/articles/420/CN-00291420/frame.html

See also

Pediatrics YR: 2000 VL: 105 DE: RCT NO: 1 Pt 1

Keywords

Gastrointestinal Diseases; Infant; Intestinal Obstruction; Neonatal Screening; non pharmacological intervention - diagn; non pharmacological intervention - diet; Nutrition Disorders; screening; Supplementation; Meconium ileus; Malnutrition; diagnostic procedures;