primary studies - published RCT

Nutritional benefits of neonatal screening for cystic fibrosis. Wisconsin Cystic Fibrosis Neonatal Screening Study Group.

Code: PM9395429 **Year:** 1997 **Date:** 1997 **Author:** Farrell PM

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

RCT

Participants

650,341 newborn infants were screened by measuring immunoreactive trypsinogen on dried blood spots (from April 1985 through June 1991) or by combining the trypsinogen test with DNA analysis (from July 1991 through June 1994). Of 325,171 infants assigned to an early-diagnosis group, cystic fibrosis was diagnosed in 74 infants, including 5 with negative screening tests. Excluding infants with meconium ileus, 56 of the infants who received an early diagnosis and 40 of the infants in whom the diagnosis was made by standard methods (the control group).

Interventions

neonatal screening vs standard diagnostic methods.

Outcome measures

Nutritional status for up to 10 years evaluated by anthropometric and biochemical

Main results

The diagnosis of cystic fibrosis was confirmed by a positive sweat test at a younger age in the early-diagnosis group than in the control group (mean age, 12 vs. 72 weeks). At the time of diagnosis, the early-diagnosis group had significantly higher height and weight percentiles and a higher head-circumference percentile (52nd, vs. 32nd in the control group; P=0.003). The early-diagnosis group also had significantly higher anthropometric indexes during the follow-up period, especially the children with pancreatic insufficiency and those who were homozygous for the deltaF508 mutation.

Authors' conclusions

Neonatal screening provides the opportunity to prevent malnutrition in infants with cystic fibrosis.

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See also

N Engl J Med. 1997 Oct 2;337(14):963-9.

Keywords

Neonatal Screening; Newborn; non pharmacological intervention - diagn; screening; diagnostic procedures;