primary studies - published RCT

Nocturnal home oxygen in the treatment of hypoxemic cystic fibrosis patients.

Code: PM2921681 **Year:** 1989 **Date:** 1989 **Author:** Zinman R

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

Multicenter randomized double-blind parallel controlled trial.

Participants

All participants with FEF 25-75

Interventions

O2 therapy or room air gas at night only, titrated to increase awake PaO2 > 70 mm Hg.

Outcome measures

Mortality, lung function, anthropometrics, RAG, psychosocial questionnaire.

Main results

Over the follow-up period there were four deaths in each group, and oxygen therapy had no significant effect on the frequency of hospitalizations. Progression of disease was ascertained from nutritional status, pulmonary function, blood gas values, exercise ability, and right ventricular ejection fraction response to exercise (as measured by equilibrium-gated radionuclide angiocardiography), and psychologic status was measured by standardized tests of mood, self-esteem, and cognitive function; group comparisons for the first year revealed no significant differences; however, school or work attendance was maintained in the oxygen group but deteriorated in the air group. Clinical signs of cor pulmonale were documented during follow-up in 10 patients in toto, and all lived at least 9 months from the onset of these signs.

Authors' conclusions

The lack of association between the onset of these signs and imminent death, or the usefulness of measurements of the maximal oxygen uptake during progressive exercise and the right ventricular ejection fraction response to exercise as prognostic indicators, suggest that death may not be the result of cor pulmonale. We conclude that nocturnal oxygen treatment in patients with cystic fibrosis did not appear to affect mortality rates, the frequency of hospitalizations, or the progression of disease; oxygen use should be instituted only after the development of symptoms related to hypoxemia.

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See also

J Pediatr. 1989 Mar;114(3):368-77.

Keywords

Adult; Home; Home Care Services; Hospitalization; Hospital care; non pharmacological intervention - devices OR physiotherapy; non pharmacological intervention - psyco-soc-edu-org; Oxygen; Respiratory Tract Diseases; Organization;