primary studies - published, non RCT

Survival effect of lung transplantation among patients with cystic fibrosis.

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

Retrospective observational cohort study from 115 CF centers in the United States, 1992-1998.

Participants

11 630 CF patients who did not undergo lung transplantation (controls) and 468 transplant recipients with CF from 115 CF centers in the United States, 1992-1998. Patients were stratified into 5 groups based on a 5-year survival prediction model (survival group 1:

Interventions

bilateral lung transplantation

Outcome measures

5-year survival prediction model (survival group 1:

Main results

Lung transplantation increased 5-year survival of CF patients in survival group 1. Survival group 2 had equivocal survival effects, and groups 3-5 had negative survival effects from transplantation. From 1994-1997, there was a mean annual prevalence of 238 patients in survival group 1 and mean annual incidence of 154 patients entering the group, approximately 1.5 times the number of lung transplantations performed each year in CF patients (mean, 104). Use of the criterion of forced expiratory volume in 1 second of less than 30% resulted in an equivocal survival benefit and identified 1458 potential candidates for transplantation in 1993.

Authors' conclusions

Cystic fibrosis patients in group 1 have improved 5-year survival after lung transplantation. The majority of patients with CF have equivocal or negative survival effects from the procedure. Selection of patients with CF for transplantation based on group 1 survival predictions maximizes survival benefits to individuals and may reduce the demand for scarce donor organs.

See also

JAMA. 2001 Dec 5;286(21):2683-9.

Keywords

Lung Transplantation; non pharmacological intervention - surg; Respiratory Insufficiency; Respiratory Tract Infections; transplantation; Infection; Respiratory Tract Diseases;