primary studies - published RCT

Non-invasive ventilation versus oxygen therapy in cystic fibrosis: A 12-month randomized trial.

Code: PM31206975 **Year:** 2019 **Date:** 2019 **Author:** Milross MA

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

Randomized, parallel group study

Participants

29 Adult patients with CF and sleep desaturation.

Interventions

Non-invasive ventilation (NIV) compared to low-flow oxygen therapy (LFO2) for 12 months.

Outcome measures

Event-free survival was defined as participants without events. Events included: failure of therapy with PaCO2 > 60 mm Hg, or increase in PaCO2 > 10 mm Hg from baseline, increases in TcCO2 > 10 mm Hg, lung transplantation or death. Outcomes were measured at baseline, 3, 6 and 12 months, including lung function, ABG, Pittsburgh Sleep Quality Inventory (PSQI), SF36 and hospitalizations.

Main results

A total of 29 patients were randomized to NIV +/- O2 (n = 14) or LFO2 (n = 15) therapy for 12 months. Of the 29 patients, 18 met the criteria for event-free survival over 12 months. NIV +/- O2 group had 33% (95% CI: 5-58%) and 46% (95% CI: 10-68%) more event-free survival at 3 and 12 months than LFO2 group. No statistically significant differences were seen in spirometry, ABG, questionnaires or hospitalizations.

Authors' conclusions

NIV +/- O2 during sleep increases event-free survival over 12 months in adults with CF. Further studies are required to determine which subgroups benefit the most from NIV.

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See also

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Keywords

Adult; non pharmacological intervention - devices OR physiotherapy; Respiratory Insufficiency; Respiratory Tract Infections; Ventilators; Positive-Pressure Respiration- PEP- pep mask; Airway clearance technique; NIV; Infection; Continuous; Artificial Ventilation; Oxygen;