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Cystic Fibrosis Research News

Title:

Correspondence between Lung Function and Symptom Measures from the Cystic Fibrosis Respiratory Symptom Diary–Chronic Respiratory Infection Symptom Score (CFRSD-CRISS)

Authors:

Laura S. Gold[a], Donald L. Patrick[b], Ryan N. Hansen[c], Christopher H. Goss[d], and Larry Kessler[b]

Affiliations:

[a]Department of Radiology, University of Washington, Seattle, Washington, United States
[b]Department of Health Services, University of Washington, Seattle, Washington, United States
[c]School of Pharmacy, University of Washington, Seattle, Washington, United States
[d]Departments of Medicine and Pediatrics, University of Washington, Seattle, Washington, United States

What was your research question?

We looked at whether lung function is related to CF symptoms during pulmonary exacerbations. We expected that symptoms like difficulty breathing, chest tightness, cough, and mucus quantity would be strongly related to a patient's lung function.

Why is this important?

Most treatments are evaluated by how much they improve lung function, not by how much patients say their symptoms are improving. If lung function and patients' assessments of their symptoms were measuring the same things, one could argue that researchers studying new treatments only need to evaluate one or the other. But if they evaluate different things, then both are important to measure.

What did you do?

We looked for statistical correlations between lung function and patient reports of their symptoms in 177 CF patients experiencing pulmonary exacerbations. We measured both lung function and symptoms on the first day of their exacerbations, a week later, and at the end of their exacerbations.

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What did you find?

Both lung function and symptoms improved by the end of treatment, but the two measures were not strongly related. An exception was that in children, we saw some moderate correlations between lung function and cough severity, mucus quantity, and wheezing.

What does this mean and reasons for caution?

Although this study was small, it indicates that it is important to evaluate new treatments by measuring both lung function and how much the symptoms are bothering the patients because each is measuring different aspects of CF.

What's next?

Future studies evaluating treatments for CF should take into account how the patients say they are doing in addition to clinical metrics like lung function.

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cfresearchnews@gmail.com