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Cystic Fibrosis Research News

Title:

EVALUATION OF AIRWAY AND CIRCULATING INFLAMMATORY BIOMARKERS FOR CYSTIC FIBROSIS DRUG DEVELOPMENT

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What was your research question?

We aimed to evaluate biomarkers (indicators of disease severity) in cystic fibrosis (CF), which are linked to inflammation in the airways and other parts of the body to work out their relationship to each other, to age and to lung function in people with CF, so as to help us understand how to use these markers to assess future treatments.

Why is this important?

CF is characterized by recurrent infections and inflammation. This chronic inflammation can damage lung tissue and cause a progressive decline in lung function. As a result, it is important to evaluate therapies that target inflammation. Finding cellular pathways involved in inflammation can help direct treatment options.

What did you do?

We analysed data from a previous study with people with CF to evaluate biomarkers from the placebo (untreated) group over time and in the placebo and treatment group before any therapy to better understand these biomarkers.

What did you find?

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We found that some blood and sputum markers closely reflected each other. We found that some better reflect lung function that others and we found that some are less variable when repeated.

What does this mean and reasons for caution?

Among the biomarkers analysed, serum high sensitivity C-reactive protein (hsCRP) and sputum neutrophil elastase (NE) are among the more promising candidates to include in clinical trials looking at anti-inflammatory treatments for people with CF. This information may help avoid having to evaluate excessive numbers of markers and provide more knowledge about the best ones to capture in clinical trials of inflammation in CF.

What's next?

Further systematic and large studies are needed to better understand which biomarkers should be measured when assessing therapies aimed at targeting inflammation in CF.

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