

Cystic Fibrosis Research News

Title:

STANDARDIZED TREATMENT OF PULMONARY EXACERBATIONS (STOP) STUDY: PHYSICIAN TREATMENT PRACTICES AND OUTCOMES FOR INDIVIDUALS WITH CYSTIC FIBROSIS WITH PULMONARY EXACERBATIONS

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What was your research question?

We wanted to understand physicians treatment goals for patients with CF who need intravenous (IV) antibiotics for a pulmonary exacerbation, observe their management practices, and compare these goals and practices to how well patients did after IV antibiotics in terms of lung function recovery and symptom improvement.

Why is this important?

Pulmonary exacerbations are important events in the lives of persons with CF, both because they interfere with patients' well-being and because most patients who have an

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exacerbation lose lung function that they will never recover. Although exacerbations are common, very little is known about which treatments provide better results. Our future goal is to compare different exacerbation treatments to optimize treatment. To do this, we need to understand the current goals and treatment practices of physicians, and how that affects patient outcomes.

What did you do?

We enrolled 220 adolescents and adults in the Standardized Treatment of Pulmonary Exacerbation (STOP) Study. Study subjects were admitted to the hospital at 11 US CF Centers for a pulmonary exacerbation and treated with IV antibiotics. We surveyed the treating physician on treatment goals, and then observed how they treated patients in terms of duration of IV antibiotics, type and route of IV antibiotics, and other medications. We compared those goals to patient outcomes (lung function recovery and symptom improvement).

What did you find?

We found that most patients are treated for about 16 days of IV antibiotics, with a broad range in choice of antibiotic therapies. There were clinically significant improvements in lung function and symptom recovery from the start of IV antibiotic therapy to the end, however the improvement in lung function often fell short of previous baseline values and physician goals. Only ~40% of patients fully recovered lost lung function, with only 65% recovering the majority of lost lung function. However, most physicians reported the IV antibiotics treatment was a success.

What does this mean and reasons for caution?

In our study we found substantial variation in the treatment regimens and duration, which may play a role in the lack of full recovery in lung function. This means there is room for improvement in how we treat pulmonary exacerbations, and deserves further research. We did not survey our patients with respect to their interest in participating in future trials, and this would be an important next step.

What's next?

Results from this study have been used to help design a large research study at multiple CF care centers that compares how patients respond when treated with antibiotics for different amounts of time. Identifying best practices and standardizing treatment of pulmonary exacerbations has the potential to improve outcomes in CF.



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