

Cystic Fibrosis Research News

Title:

OUTCOMES ASSOCIATED WITH ANTIBIOTIC REGIMENS FOR TREATMENT OF MYCOBACTERIUM ABSCESSUS IN CYSTIC FIBROSIS PATIENTS

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What was your research question?

Some patients with cystic fibrosis (CF) will grow bacteria called *Mycobacterium abscessus* in their lungs, but there is little information about how patients fare after treatment. We explored the clinical outcomes of patients with CF treatment for *M. abscessus* at our center.

Why is this important?

CF patients who grow *M. abscessus* tend to have decrease in lung function. However, treatment can have significant side effects since it requires multiple antibiotics for long periods of time. There are currently no studies that answer whether treating *M. abscessus* helps to improve lung function, or whether the type of antibiotics used by doctors are best for treating this bacteria.

What did you do?

We looked at clinical records for 37 patients with cystic fibrosis who had *M. abscessus* in their sputum and received antibiotics to treat it. We examined lung function before they received antibiotics and then also again at different times after starting antibiotic treatment. We also analyzed whether or not the treatment cleared *M. abscessus* from their lungs.



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What did you find?

Most patients received three or more antibiotics at the same time to treat *M. abscessus*, and on average patients received 5 weeks of intravenous (IV) antibiotics followed by 16 weeks of oral and inhaled antibiotics. Patients had better lung function 30 days and 60 days after starting antibiotics compared to their baseline. After 90 days, lung function went back to be about the same as it was before antibiotics were started, but was not worse. No particular antibiotics improved lung function better than the others, but patients who received clarithromycin were somewhat more likely to clear the infection.

What does this mean and reasons for caution?

Antibiotic treatment of *M. abscessus* did lead to short term improvements in lung function. While we did not see long term benefit, patients did not seem to get worse following treatment like we might have otherwise expected. The fact that patients on clarithromycin seemed to clear *M. abscessus* better is interesting, but there are too many other factors that could explain this finding to draw any strong conclusions.

What's next?

This data should help inform the design of future, larger studies of treatment of *M. abscessus* in CF.

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