

Cystic Fibrosis Research News

Title:

Using inhaled aztreonam in the treatment of exacerbations of cystic fibrosis

Authors:

Freddy Frost, Gregory R. Young, Laura Wright, Nahida Miah, Darren L. Smith, Craig Winstanley, Martin J. Walshaw, Joanne L. Fothergill, Dilip Nazareth

Affiliations:

University of Liverpool, Northumbria University, Liverpool Heart & Chest Hospital

What was your research question?

Are there any potential benefits in using inhaled aztreonam to treat CF exacerbations (flare ups of lung disease)? And secondly, what is the impact of inhaled aztreonam on the bacteria in the lungs?

Why is this important?

Exacerbations are important events for people with CF because they are associated with considerable worsening of the symptoms and can also have a long-term negative impact. Currently, for people infected with bacteria like *Pseudomonas aeruginosa*, severe exacerbations are treated with strong intravenous (directly into the blood) antibiotics but these medicines can have side-effects and long term consequences. Inhaled antibiotics such as aztreonam target the lung directly and could therefore hopefully have fewer side-effects and complications but still treat an exacerbation effectively.

What did you do?

We did a study to see the effect of inhaled aztreonam plus one intravenous antibiotic compared to the current standard treatment of two intravenous antibiotics for treating people admitted to hospital with an exacerbation. We were interested in how each treatment affected lung function and quality of life. We also looked at how each treatment affected the community of bacteria living within the lung known as the “lungs microbiome”.

What did you find?

Our results suggest inhaled aztreonam might improve lung function and quality of life more than current standard treatments. We also found each treatment affected the lung microbiome in different ways.



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What does this mean and reasons for caution?

Our study was very small so based on these results we could not recommend doctors should use inhaled aztreonam for treating exacerbations at this moment. But improved lung function and quality of life suggest we need larger studies to try to confirm these findings.

What's next?

We are designing larger studies to further investigate the effects of inhaled aztreonam on exacerbations.

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