

Cystic Fibrosis Research News

Title:

***Streptococcus pseudopneumoniae*, an opportunistic pathogen in patients with cystic fibrosis**

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What was your research question?

Our aim was to analyse both the clinical impact and microbiological characteristics of *Streptococcus pseudopneumoniae* in people with cystic fibrosis (CF).

Why is this important?

Streptococcus pseudopneumoniae is a bacterial species first described in 2004 and is closely related to the pneumococcus, which is a common cause of lung and bloodstream infections. *S. pseudopneumoniae* has been recognized as an opportunistic pathogen during respiratory tract infections in people with underlying diseases other than CF, but its role in CF patients remained uninvestigated.

What did you do?

In this study, we reviewed the clinical and microbiological (e.g. antibiotic susceptibility) data associated with *S. pseudopneumoniae* isolation in 20 people attending our CF center. *S. pseudopneumoniae* isolates were identified during routine microbiological analysis of their

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respiratory tract samples. We also confirmed the identity of the *S. pseudopneumoniae* isolates using additional DNA-based methods.

What did you find?

We showed that:

- 1) Similar to pneumococcus, *S. pseudopneumoniae* is mainly identified in children with CF, and was sometimes associated with pulmonary exacerbations either as the sole pathogen or as part of a polymicrobial infectious process,
- 2) Accurate *S. pseudopneumoniae* identification remains difficult using methods that are commonly used in microbiological laboratories,
- 3) *S. pseudopneumoniae* strains isolated from people with CF were universally susceptible to several antibiotics including amoxicillin, allowing oral treatment if necessary.

What does this mean and reasons for caution?

S. pseudopneumoniae should be considered as an additional opportunistic pathogen in CF, as in some people, it was the only identified reason for pulmonary exacerbation. However, due to the low number of people included in our study, larger studies are needed to confirm the findings of this preliminary study.

What's next?

This study is the first to describe the microbiological and clinical data associated with *S. pseudopneumoniae* identification in people with CF and the results warrant additional studies to increase knowledge of the epidemiology and clinical significance of *S. pseudopneumoniae* in CF.

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