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Cystic Fibrosis Research News

Title:

STREPTOCOCCUS 1 PNEUMONIAE OROPHARYNGEAL COLONIZATION IN CHILDREN AND ADOLESCENTS WITH CYSTIC FIBROSIS

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What was your research question?

This research was designed to evaluate whether a group of school-age children and adolescents with cystic fibrosis have Streptococcus pneumoniae bacteria in their airways in order to understand their potential risk of pneumococcal infection and the coverage offered by vaccines.

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Why is this important?

Our study evaluated the long-term impact of pneumococcal vaccine in cystic fibrosis, providing suggestions for the prevention of pneumococcal infection.

What did you do?

A sample of mucus from the throat was obtained from 212 children and adolescents with cystic fibrosis during routine clinical visits in Italian CF-centers. DNA from swabs was analyzed for Streptococcus pneumoniae and the different pneumococcal types.

What did you find?

Streptococcus pneumoniae was found in 42 (19.8%) patients. Carriage was more common in younger patients and tended to decline with age. Administration of systemic and/or inhaled antibiotics in the previous 3 months was significantly related with a reduced carrier state. Vitamin D levels ≥30 ng/mL in the blood was less common in carriers than that in non-carriers. No significant difference between the vaccinated and unvaccinated subjects was observed. In both the vaccinated and unvaccinated subjects, specific types of Streptococcus pneumoniae were found.

What does this mean and reasons for caution?

Streptococcus pneumoniae is seen more in school-age children and adolescents with cystic fibrosis than previously thought, and pneumococcal vaccination administered in the first year of life does not reduce the risk of re-occurrence in later childhood and adolescence.

What's next?

It will be important to evaluate factors that might influence the carriage rates of Streptococcus pneumonia and the best vaccination strategy to reduce the risk of re-occurrence.

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