*primary studies - published, non RCT*

# Vaccination of cystic fibrosis patients against Pseudomonas aeruginosa reduces the proportion of patients infected and delays time to infection.

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### Study design (if review, criteria of inclusion for studies)

Survey, longitudinal prospective cohort + nested case-control study. Vaccinated patients and controls were attending a single CF clinic and received the same clinical management throughout the study period. Follow-up of 26 of these patients from 1989 to 2001.

### Participants

In 1989-1990, 30 young children with CF, mean age 7 years, with no prior history of infection with P. aeruginosa, were vaccinated against P. aeruginosa with a polyvalent conjugate vaccine. Comparisons were made with a CF patient control group matched for gender, age and, where possible, genetic mutation.

### Interventions

The patients were given yearly vaccine boosters.

### Outcome measures

Main outcomes were time to infection, proportion of patients infected, development of P. aeruginosa mucoid phenotype, lung function and body weight.

### Main results

The time to infection with P. aeruginosa was longer in the vaccination group than in the control group and fewer vaccinated patients than controls became chronically infected (32% versus 72%; P < 0.001). The proportion of mucoid infections was higher in the control group (44%) than in the vaccinated group (25%). Patients >/=18 years of age at the end of the study had a lower mean forced expiratory volume at 1 s (FEV1) than did those 13-17 years of age, but this difference was small in the vaccinated group (73.6% versus 83.7%) compared with the controls (48.0% versus 78.7%). In the >/=18 year age category the mean FEV1% at 10 years was 73.6% (vaccinated) and 48.0% (controls) (P

### Authors' conclusions

Regular vaccination of young CF patients for a period of 10 years with a polyvalent conjugate vaccine reduced the frequency of chronic infection with P. aeruginosa. This was associated with better preservation of lung function. Vaccinated patients gained more weight during the study period, a possible indication of an improved overall health status.

http://www.mrw.interscience.wiley.com/cochrane/clcentral/articles/872/CN-00496872/frame.html

### See also

Pediatric Infectious Disease Journal YR: 2004 VL: 23 DE: CCT NO: 6

### Keywords

Adolescent; Adult; Bacterial Infections; Child; Immunization; Infection; non pharmacological intervention - diagn; pharmacological_intervention; Pneumonia; Pseudomonas aeruginosa; Pseudomonas; Respiratory Tract Diseases; Respiratory Tract Infections;