Abstract

Objective. To define epidemiologic relationships to determine the prevalence and potential risk factors for nasopharyngeal colonization by antibiotic-resistant pneumococci, their serotypes and their antibiotic susceptibility patterns in children attending a daycare center (DCC). Material and Methods. A prospective cohort study was conducted among children (n=53) attending the DCC at Hospital Infantil de México Federico Gómez, which is staffed by 20 employees. Patients were enrolled in the study during a two-year period from September 1997 to September 1999. All the participants were followed prospectively, swabbing them every four months. The strains recovered were typed and screened for susceptibility to several antibiotics. The daycare records were reviewed also. Odds ratios and fisher’s exact test or chi square test of significance were computed from contingency tables as appropriate. Exact 95% confidence intervals were computed for odds ratios. Data analysis was performed using Epi statistics program version 6.04 a. Results. Pneumococci were recovered from 45/53 of the infants at one or more visits. A total of 178 isolates were carried. The carriage rate was 47%. Only 7 adults acquired pneumococci during the study. Types 6,14,19 and 23 were prevalent and represented 77% of the total. Antibioticresistant strains were higher to penicillin and erythromycin. Conclusions. Children were frequent carriers of pneumococci, the rate of carriage was high in infancy and tended to decrease with age. The types commonly carried by children were the same as those causing invasive disease. There is a high proportion of carriers with antibiotic-resistant S. pneumoniae strains. Children who have had frequent antimicrobial courses are at particular risk. The English of this paper is available too at: http://www.insp.mx/salud/index.html

Keywords

Key words: nasopharyngeal carriage; Streptococcus pneumoniae; drug resistance, microbial; child day care centers; Mexico