

Serotype distribution and antimicrobial resistance of *Streptococcus pneumoniae* isolate causing acute otitis media in children in Marrakech, Morocco

Warda K *

Laboratoire de Microbiologie-Virologie FMPM

Abstract

Backgrounds

Despite the widespread immunization of infants with the pneumococcal conjugates vaccines (PCV-10, PCV-13) in Morocco, acute otitis media (AOM) continues to be a childhood disease, usually due to *Streptococcus pneumoniae* (Sp). The main objective of this study was to assess the pneumococcal carriage, serotypes distribution, and antimicrobial susceptibility in children with AOM.

Methods

A prospective study was conducted, in Marrakech from January to June 2018, among children 6 to 36 months of age with AOM. Parents were asked to complete a questionnaire. Specimens were collected for isolation of Sp. The pneumococci strains were further identified, serogrouped (Pneumotest-Latex), serotyped (real-time PCR), and tested for antimicrobial susceptibility (BD Phoenix).

Results

The pneumococcal carriage rate was 49,7%, it constituted 56,2% of children who had not received a complete series of PCV compared with 43,8% of children who had received a complete series. There

was statistically significant concordance between preschools, conjunctivitis, and pneumococcal colonization ($p < 0,001$). The most frequent serogroups/serotypes were 6C/D, 10, and 19B/C. The majority which is 75,4% of the isolates belonged to non-vaccine serotypes. The Strains of Sp isolated in our study showed a diminished susceptibility to penicillin G with a rate of 28,7%. Resistance to amoxicillin, erythromycin, tetracycline, and cefuroxime were 96%, 87,3%, 77,6%, and 72,8% respectively. Almost all serogroups/serotypes were multidrug-resistant.

Conclusion

In summary, PCV10 appears to provide less protection compared with PCV13 among children with OMA. The study shows a high incidence of multi-drug resistance of isolates which highlights the importance of continued surveillance to predict the future penicillin susceptibility of Sp.

Biography:

Warda K is working in Laboratoire de Microbiologie-Virologie.

