Abstract

This retrospective study investigated the patterns of antimicrobial susceptibility among clinical isolates of *Streptococcus pneumoniae* during the period from 1982 to 1999 at the Jordan University Hospital. Antimicrobial susceptibility testing was done using the disk diffusion method. Until 1990, the vast majority of isolates were reported as susceptible to penicillin/ampicillin, cefalotin, chloramphenicol, lincomycin, and erythromycin although susceptibility to lincomycin and erythromycin was less than that to other antimicrobials. A remarkable increase in resistance rates to all antimicrobials tested, except for vancomycin, started to be observed as of 1991. During the period from 1996 to 1999, on the other hand, alarmingly low susceptibility rates were observed among *S. pneumoniae isolates* to penicillin (43%-62%) as measured by a one microgram oxacillin disk. More than 80% of isolates remained susceptible to erythromycin and lincomycin, whereas all isolates remained susceptible to vancomycin over the study period. Results of this study indicate that high rates of penicillin-intermediate resistant or resistant isolates of *S. pneumoniae*started to emerge in Jordan during the last few years. It is, therefore, recommended that all pneumococcal isolates be screened routinely for penicillin resistance by oxacillin (1 µg) susceptibility testing, and that minimal inhibitory concentration (MIC) be determined for any unsusceptible isolate recovered from invasive infections.