

Antimicrobial-susceptibility profile of *Streptococcus pneumoniae* strains obtained of patients attended in a Hospital of Campinas, Brazil

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Introduction: *Streptococcus pneumoniae* (pneumococcus) is one of the most common causes of pneumonia, meningitis and sepsis in infants, children and adults, responsible for elevated morbidity and mortality indexes, particularly in developing countries. The treatment for pneumococcal diseases is based on antibiologic therapy which, in general, is empiric about etiology and *in vitro* antimicrobial susceptibility. Since that the epidemiology of the pneumococcal disease varies according to region and through time, periodical evaluations of the antimicrobial resistance make necessary for a better therapeutic orientation and control strategies definitions.

Objective: The objective of this study is to evaluate the antimicrobial-susceptibility profile of pneumococcal strains obtained of patients attended at the Clinical Hospital of the State University of Campinas (HC-Unicamp) between 2007 and 2012.

Methodology: 334 pneumococcal strains obtained of patients with clinical diagnostic of pneumonia, meningitis, bacteremia and sepsis were analyzed. The strains were submitted to susceptibility test through antibiogram for the antibiotics cloranfenicol, clindamicin, levofloxacin, penicillin, sulfamethoxazole-thrimetoprim (SXT), tetraciclina and vancomicina and comparisons between the susceptibility and resistance profiles were accomplished. **Results:** The higher resistance percentage was observed in SXT, with 55 (16,5%) resistant strains. Accordingly to age group, the highest resistant percentage occurred in the group of 41-60 years old, with 26 strains (7,78%) showed resistance to at least one antibiotic. The higher frequency of general resistance was observed in 2008, with 33 (9,88%) resistant strains. In 2012 (until the moment), 25 (7,49%) strains showed resistance to at least one antibiotic. 5 strains (1,5%) showed multi resistance (resistance to 3 ou more antibiotics) and 6 (1,8%) were resistant to penicillin. It was observed a linear increase in the resistance to tetraciclina starting from 2009. **Conclusion:** The higher frequency of SXT-resistance is probably due to the higher use of this antibiotic for the infections treatment. The percentage of resistant strains in 2012 is preoccupying, since that just a half of this year has been elapsed, as well as the increase of resistance to tetraciclina since 2009. Between the antibiotics, vancomicina deserves a detach, for not having related resistance in this 6 years, thus, it could be important for the initial treatment of pneumococcal infection. Penicillin resistance was not observed, which is important, since that this is the antibiotic of first choice for the majority of pneumococcal infections. Continuous surveillance must be accomplished, in order to detect possible modifications in these trends.

Keywords: *Streptococcus pneumoniae*, antimicrobial-susceptibility, resistance