

Multicenter surveillance of antimicrobial resistance of Streptococcus pyogenes, Streptococcus pneumoniae, Haemophilus influenzae, and Moraxella catarrhalis to 14 oral antibiotics.

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摘要

Abstract

Background and Purpose: Data on the in vitro activities of orally administered cephalosporins, particularly 3rd generation cephalosporins, against recent pathogens responsible for community-respiratory tract infection are lacking. Methods: A susceptibility surveillance of 267 isolates of *Streptococcus pneumoniae*, 205 of *Streptococcus pyogenes*, 204 of *Haemophilus influenzae*, and 147 of *Moraxella catarrhalis* to 14 oral antimicrobial agents using the agar dilution method was carried out from March 2002 to October 2002 in Taiwan. The isolates were recovered from clinical specimens of patients treated at National Taiwan University Hospital in Taipei, Veterans General Hospital in Taichung, and Veterans General Hospital in Kaohsiung. Results: High rates of non-susceptibility to penicillin (60%), cefaclor (67%), cefuroxime (62%), cefpodoxime (64%), clarithromycin (91%), and trimethoprim-sulfamethoxazole (98%) for *S. pneumoniae* isolates and high rates of non-susceptibility to ampicillin (70%), clarithromycin (34%), and trimethoprim-sulfamethoxazole (63%) for *H. influenzae* isolates were found. The rank order of oral cephalosporin activity based on the minimum concentrations at which 90% of the isolates were inhibited (MIC90s) for *S. pneumoniae* was cefpodoxime > cefuroxime > cefixime > cefaclor, cephadrine > cephalexin and for *H. influenzae* and *M. catarrhalis* was cefixime > cefpodoxime > cefuroxime > cefaclor > cephalexin, cephadrine. Among the 75 *S. pneumoniae* isolates resistant to penicillin (MICs ranged 2 to 4 mg/litre), 4% were intermediate to amoxicillin and >90% were resistant to cefaclor, cefuroxime, and cefpodoxime. For *S. pyogenes* isolates, all were susceptible to penicillin, 21% were not susceptible to clarithromycin and 4% were not susceptible to clindamycin. Thirty-four percent of *H. influenzae* isolates were not susceptible to clarithromycin. The MIC90 of

clarithromycin against *M. catarrhalis* isolates was 0.5 mg/litre. Conclusions: Cefpodoxime, cefixime, and cefuroxime are promising agents against these bacterial pathogens, except for penicillin-non-susceptible *S. pneumoniae* isolates.