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Perfiles de resistencia a fluoroquinolonas en aislamientos clínicos de cocos Gram positivos provenientes de hospitales colombianos, 1994-2004

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Nota: Marylin Hidalgo y Jinnethe Reyes contribuyeron de igual forma en este estudio

Resistance profiles to fluoroquinolones in clinical isolates of Gram positive cocci

Introduction. Fluoroquinolones are broad spectrum antibiotics commonly used in the treatment of infections.

Objective. Resistance profiles of Gram-positive cocci to fluoroquinolones were evaluated in isolates of *Streptococcus pneumoniae*, *Staphylococcus aureus*, coagulase negative staphylococci and *Enterococcus* spp. The samples were recovered from Colombian hospitals between 1994 and 2004.

Materials and methods. The minimal inhibitory concentrations of ciprofloxacin, moxifloxacin and gatifloxacin were determined in 270 clinical isolates of *S. pneumoniae*, 348 of *S. aureus*, 176 of coagulase negative staphylococci and 123 enterococci. The minimal inhibitory concentration of levofloxacin was also determined in all isolates of methicillin resistant *S. aureus* (MRSA). An agar diffusion susceptibility test with disks of levofloxacin and ofloxacin was also applied to all isolates of *S. pneumoniae*.

Results. A total of 269 (99.6%) isolates of *S. pneumoniae* were susceptible to moxifloxacin and gatifloxacin. For levofloxacin and ofloxacin, resistance in *S. pneumoniae* was found in 1.5% and 8.9% of isolates, respectively. The ciprofloxacin minimal inhibitory concentration was =4 µg/ml in 15.9% of pneumococcal isolates. The rates of resistance to ciprofloxacin, gatifloxacin and moxifloxacin in the 348 *S. aureus* isolates were 55.4%, 54.9% and 52.6%, respectively, increasing to 92.3%, 91.3% and 87.5%, respectively, in methicillin resistant isolates. Resistance to levofloxacin was found in 91.8% of MRSA isolates. The rates of resistance to ciprofloxacin, gatifloxacin and moxifloxacin in coagulase negative staphylococci and vancomycin-susceptible enterococci were between 25.6% and 31.8%. All vancomycin-resistant enterococci were resistant to all of the fluoroquinolones tested.

Conclusion. The newer fluoroquinolones have maintained effective activity against clinical isolates of *S. pneumoniae*. The rates of fluoroquinolone resistance in *S. aureus* were very high, particularly in methicillin resistant isolates (approaching 100%).

Key words: fluoroquinolones, *Streptococcus pneumoniae*, *Staphylococcus aureus*, *Enterococcus*; drug resistance, microbial; Colombia.