Results

- The most common causes of BSI were S. aureus (20.5%), E. coli (19.0%) and Klebsiella spp. (12.3%) while P. aeruginosa (12.1%), S. aureus (10.2%) and Enterobacter spp. (5.1%) represented the top five organisms from pneumonia. Gram-negative bacilli accounted for 44.5% of the infections overall.

- Amikacin, carbapenems and colistin showed remarkable activity (>98% overall susceptibility) [S] against chloramphenicol (17.7%), ceftriaxone (47.3%) and ceftazidime (61.5%). In contrast, high resistance rates to ciprofloxacin (42.0%) and gentamicin (36.3%) were observed overall. But especially in isolates collected from Mexican medical centres (Table 1 and 2).

- Colistin (MIC50, 0.5 μg/mL; 97.0 %) was the most active agent against Klebsiella spp., followed by meropenem (MIC50, 0.25 μg/mL; 92.2 %) and imipenem (MIC50, 0.25 μg/mL; 92.5 %; Tables 1 and 2).

- Overall, 24.7 and 52.7% of the E. coli and Klebsiella spp. exhibited an ESBL phenotype. The highest ESBL phenotype rates among the E. coli strains were observed in Mexico (48.4%), followed by Chile (23.8%), Argentina (16.1%) and Brazil (12.6%). In contrast, among Klebsiella spp., ESBL phenotype rates were highest in Argentina (64.0%) (Table 2). Klebsiella (53.3%).

- Among Enterobacter spp., only E. coli and 92.0% of strains were susceptible to ceftazidime, colistin and piperacillin respectively (Table 1).

- The carbapenem was the most active antimicrobial agent against Enterobacter spp., followed by ceftriaxone (MIC50, 0.25 μg/mL; 94.1 %) and imipenem (MIC50, 0.25 μg/mL; 93.7 %; Tables 1 and 2).

Conclusions

- Gram-negative bacilli account for a significant proportion of infections in Latin America, with a high percentage of isolates resistant to first-line empirical antimicrobials.

- An important increase in carbapenem-resistant bacteria was observed among Acinetobacter spp. and K. pneumoniae, mainly due to production of carbapenem-hydrolyzing OXA and KPC-2 enzymes, respectively.

- Only colistin shows considerable activity (>77% overall coverage) against the five most frequently isolated Gram-negative bacilli from Latin American medical centres participating in this study (Table 1).

- Empirical antimicrobial therapy for serious infections caused by Gram-negative bacilli requires the combination of two or more agents adequate for these multidrug-resistant isolates (Table 1).

References


