The Infectious Disease Society of America (IDSA) publishes therapy guidelines for the treatment of a wide variety of infections, including community- and hospital-associated intra-abdominal infections (IAI) [1]. These guidelines are periodically updated, with a new set of guidelines for IAI due to be published 4th quarter of 2020. However, with resistance rates varying greatly by geographical region as well as over time, it is important to look at such guidelines in combination with national or local antimicrobial stewardship programs.

The Study

The Infectious Disease Society of America (IDSA) program has been monitoring the activity of extended-spectrum beta-lactamase (ESBL) and non-ESBL-producing isolates of Escherichia coli, Klebsiella pneumoniae, and other Enterobacteriaceae relative to the susceptibility of antimicrobials recommended in the IDSA’s Guidelines for Empiric Therapy of Complicated IAIs. The results are published in this quarterly report to provide information about the in-vitro activity of study drugs and the susceptibility of gram-negative, aerobic, and facultatively anaerobic pathogens from North America.

Materials and Methods

All isolates were non-repeat isolates derived from IAIs. Only one isolate per species per patient was accepted into the study. Each participating laboratory collected up to 100 consecutive non-selected gram-negative pathogens each year of the study. Isolates from 2007 were identified to the species level and tested at a central laboratory. Laboratories Internationally for Microbiology Studies, a subsidiary of International Health Management Associates, Inc., performed quality control on each day of testing.

Conclusions

Antimicrobial agents recommended by the IDSA that achieved >80% susceptibility in all three countries and can help alert physicians to changes in susceptibility of aerobic gram-negative IAI pathogens around the world since 2002, resistance data are necessary to determine appropriate empiric therapy for IAI. The SMART program has been monitoring the activity of study drugs in all 3 countries. SMART continues to provide important information about levels of susceptibility of aerobic gram-negative IAI pathogens, which can help alert physicians to changes in susceptibility of aerobic gram-negative IAI pathogens around the world since 2002. Resistance data are necessary to determine appropriate empiric therapy for IAI.

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References


4. Distribution of isolates by species, ESBL incidence rates among E. coli, K. pneumoniae, and K. oxytoca, and overall susceptibility of Enterobacteriaceae and non-Enterobacteriaceae in the three countries is summarized in Figures 1-5.