An Update on Advancements in Treatment Options for Managing Klebsiella Pneumoniae Infections	
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Purpose of Review

Klebsiella pneumoniae is a significant gram-negative opportunistic pathogen, which causes a variety of infectious diseases, including bacteremia, urinary tract infections, liver abscesses, and pneumonia. The increasing prevalence of multidrug-resistant K. pneumoniae was recognized in 2017 by the World Health Organization as a critical public health threat. It poses a grave public health menace as the multiple drug resistance limits the efficient treatment options for such infections. Here, we discussed the recent findings about the new strategies for the possible treatment of infections caused by K. pneumoniae.

Recent Findings

Recently, meropenem/vaborbactam is approved by the US FDA for the treatment of cUTIs, particularly for K. pneumoniae infections. Ongoing clinical trials have also proved its enhancement in clinical cure and potential of improved tolerability comparative to other standard therapies. Ceftazidime/avibactam also represents a major step forward in the treatment of these UTIs in view of choosing the most appropriate treatment. Imipenem/relebactam, plazomicin, eravacycline, cefiderocol, and aztreonam-avibactam are recently reported to be active against carbapenem-resistant K. pneumoniae.

Summary

We retrospectively analyzed published data on the use and outcomes of antimicrobial therapy for K. pneumoniae infections. We discussed plazomicin, eravacycline, fosfomycin, tigecycline, and polymyxin as prevalent therapeutic options. Ceftazidime/avibactam and meropenem/vaborbactam stand out as new combination therapeutic options for infections caused by carbapenemase-producing K. pneumonia.

Recently approved cefiderocol possesses an extended antibacterial spectrum, including KPC and MBL producers