Background: Colonization of the nasopharynx (NP) by N. meningitidis (NM) can lead to invasive disease. Chemoprophylaxis is utilized to eradicate NP colonization and prevent transmission to noncolonized contacts. This study evaluated the activity of CEM-101 against invasive NM isolates.

Methods: 62 isolates (29.1% from blood culture) were collected from 29 medical centers in North and South America and Europe from 1997 to 2007. The isolates were tested for susceptibility (S) to CEM-101 and 10 comparators, including β-lactams, fluoroquinolones (FQs), macrolides and three other drug classes, by the CLSI broth microdilution methods. Genotypic identification was performed for serogroups (G) C, B, Y and W-135.

Results: 56 isolates were resistant (R) to nalidixic acid, while 24% were resistant to levofloxacin. CEM-101 showed more than 400-fold greater activity than other agents in the class against R isolates with reduced susceptibility to penicillin and FQs.

Discussion: CEM-101 is a fluoroketolide agent with enhanced dilation binding, which demonstrates potent activity against pathogens resistant to MLSB agents due to 23S rRNA mutations. The MIC90 was <0.015 µg/ml, which is consistent with the MIC90 of ≤0.008 µg/ml for C. pneumoniae. The results were confirmed by Eran et al. (J Antimicrob Chemother 2009;63:150-7) using C. pneumoniae isolates.

Conclusions: The results suggest that CEM-101 may be a useful agent for the treatment of invasive NM infections.

References


