Effect of Various Media on Activity of NXL 103 (previously XRP 2868) Against H. influenzae

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ABSTRACT

One hundred and eight H. influenzae strains were tested. Of these, 53 were β-lactamase positive, 35 β-lactamase negative and 20 BLNAR strains. All BLNAR strains were previously genotypically characterized in our laboratory. They all had abnormalities in PRBP (4). Of the 108 strains, 104 were untypeable and 4 were type b. NXL103 susceptibility powder (Novexel SA, Romainville, France) was used to test MICs of each HTM. Microdilution trays were incubated in ambient air or in 5-7% CO2 atmosphere.

RESULTS

Trays prepared from HTM that was stored (6 weeks at 22°C, 9°C and -20°C) generally produced less viable growth than those prepared from the freshly prepared HTM. Remel, IsoSensitest and PML broths. The lack of good growth in some of the trays prepared from the stored HTM made MICs more difficult to interpret.

CONCLUSION

- β-Lactamase and β-Lactamase-negative, Ampicillin-Resistant (BLNAR) H. influenzae have been isolated from children in France and Japan but also from other sources (4).

The current study tested activity of NXL 103 against a spectrum of H. influenzae strains with differing genotypes and phenotypes using different media. Neurospira pneumoniae, Haemophilus influenzae and to a lesser extent Moraxella catarrhalis (2). Of existing oral compounds active against all three of these organisms, only amoxicillin/clavulanate and the broad-spectrum quinolone group are convincingly active against these three species (2). In the clinical activity of the macrolide-azalide-ketolide group against Haemophilus influenzae when results of MICs, pharmacokinetics/pharmacodynamics, in vitro efflux studies and (where available) double-tube inhibitory media studies are carefully examined and compared (2). Of the streptomycin group, quinupristin/dalfopristin has MICs against H. influenzae which are above achievable serum levels (8).

β-Lactamase producing H. influenzae are widespread throughout the world. Recent, more reports of increased rates of β-lactamase negative ampicillin-resistant (BLNAR) H. influenzae have appeared in the literature especially from France and Japan but also from other sources (4).

A new oral agent with a different mechanism of activity is needed against these organisms, especially in children where quinolones cannot be used. NXL 103 had an overall MIC of 0.03 μg/ml and an MIC of 1.6 μg/ml, with no difference between β-lactamase positive, β-lactamase negative and BLNAR strains. Of note was the similar high potency of one of its components, RPR 132522, which had the same MICs as the combination (6).

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REFERENCES


