Int. J. Antimicro. Agents, 20, 227-229 (2002)

Interaction between 3,4-dihydropyridines and ampicillin, and erythromycin on different *E. coli* strains

Gyorgyi Gunics¹, Sandor Farkas¹, Noboru Motohashi²*, Anamik Shah³, Gaveriya Harsukh³, Masami Kawase (河瀬雅美) ⁴, and Joseph Molnar¹

¹Department of Microbiology, Albert Szent-Gyorgyi Medical University, Szeged, Hungary; ²Meiji Pharmaceutical University, Tokyo, Japan; ³Department of Chemistry, Saurashtra University, Rajkot, India; ⁴Faculty of Pharmaceutical Sciences, Josai University, Saitama

Eleven analogues (G1-11) of nifedipine showed synergistic interactions with ampicillin and erythromycin on *E. coli* K12LE140/F"lac. The antibacterial effect of ampicillin was enhanced by most analogues but G9 and verapamil were antagonistic. G7 and 8 were synergistic with erythromycin and four were additive. With a sensitive clinical isolate of *E. coli* Gy-1/Ap_{sens}Er_{res}., G1 antagonized the antibacterial effect of ampicillin and a synergistic effect was found in the combination of erythromycin with G4, G5, G6 or G7. None of the drugs had any effect on a multidrug resistant clinical isolate of *E. coli* Gy-2/Ap_{sens}Er_{res}.