Microbialchemistry, College of Pharmacy,Seoul National University

The purpose of this study was to investigate the prevalence of antibiotics resistance macrolide, lincosamide, and streptogramin B antibiotics (MLS) in Gram-positive bacteria. The 1037 clinical isolates were provided by hospital laboratories in Seoul between May 1999 and January 2000. The determination of MICs(㎍/ml) was made by the agar dilution method recommended by the National Commit for Clinical Laboratory Standards(NCCLS) and the French Society for Microbiology (FMS).
S. aureus had erythromycin MICs between 0.125㎍/ml and 64㎍/ml and the resistant strains was 71% (MIC, 8 ㎍/ml) to this antibiotic.
The strains were also highly resistant (MIC 50/MIC90, 64㎍/ml) to clarithromycin, josamycin, azithromycin, and clindamycin, 70%, 64%, 72%, and 63% of the isolates were resistant to this antibiotics, respectively. But the strains were susceptible to pristinamycin (13% resistance). By NCCLS interpretive criteria, 59%, 61%, 43% 66%, 41% and 4% of Coagulase-negative staphylococci (CNS) clinical isolates were resistant to erythromycin, clarithromycin, josamycin, azithromycin, clindamycin and pristinamycin, respectively. Enterococci had 59%, 61%, 43%, 66%, 41%, and 4% resistance ratio to erythromycin, clarithromycin, josamycin, azithromycin, clindamycin and pristinamycin, respectively.
In this study Gram-positive bacteria in Seoul were resistant to Macrolide(erythromycin, clarithromycin, josamycin, azithromycin) and Lincosamide(clindamycin), but these bacteria were susceptible to Streptogramin B(pristinamycin).

[PA1-4] [04/21/2000 (Fri) 10:30 - 11:30 / [1st Fl, Bldg 3]]

In vitro Antibacterial Effect of YJA20379-8 on Helicobacter pylori

Lee SB, Sohn SK, Jung YK, and Chon JO

R&D Center, Yung-Jin Pharmaceutical Co., Ltd.

We compared the susceptibility of Helicobacter pylori to two antiulcer agents, expressed as MICs and as bactericidal effectiveness in short (24 hours) time and long time (7 days) killing studies. MIC values of YJA20379-8 and omeprazole were about 6 mg/L and 31 mg/L respectively, for 10 strains of Helicobacter pylori. Long time-killing kinetic study demonstrated that YJA20379-8 produced decrease of viability within 1 day but omeprazole did not show bactericidal effect in the same drug concentration. Short time-killing kinetic study showed YJA20379-8 produced 2.9 log decrease in viability, but omeprazole slightly increased. As a results of MIC and time-kill data, a growth inhibitory effect of YJA20379-8 on Helicobacter pylori was observed and more potent than that of omeprazole.

[PA1-5] [04/21/2000 (Fri) 10:30 - 11:30 / [1st Fl, Bldg 3]]

5-FU inhibits the production of nitric oxide in stomach cancer cells

Jung, ID, Lee, KB1, Min, SK2, Lee HY

Department of Pharmacology, 1Department of Biochemistry, 2Department of Pathology, College of Medicine, Konyang University, Nonsan 320-711

Nitric oxide (NO) is synthesized in mammalian cells from the amino acid L-arginine by a family of enzymes, the nitric oxide synthases (NOS). This molecule plays a key role in many physiological as well as pathological processes, including inflammation and neoplasia. 5-fluorouracil (5-FUra), an antimetabolite effective against colon and gastric tumors, has been shown to suppress nitric oxide biosynthesis in colon carcinoma cell line, DLD-1. (Jin, Y., Heck, D.E., DeGeorge, G., Tian, Y., and Laskin, J.D. (1996) Cancer Res. 56, 1978). However, the exact mechanism how 5-Fura reduces NO production has not been known. In the present study, we characterized the effect of 5-Fura on NO