Hydrogel

Jung KS, Kim DD, Shin YH and Lee CH

College of Pharmacy, Pusan National University

The purpose of this study was to evaluate the effects of various enhancers on the in vitro rat skin permeation of ciclopirox olamine from novel soft hydrogel (S-Gel).
A number of 1% ciclopiroxe S-Gel formulations with and without one of various enhancers were prepared and compared with each other. The in vitro rat skin permeation of drug was investigated using Keshary-Chien permeation cells at 37℃. The drug concentrations were determined by gas chromatography and the fluxes of ciclopiroxe were calculated from the slope of linear portion of the permeation profiles.
Among various enhancers used in this experiment, dodecylamine, HPE-101 and oleic acid were the most effective enhancers. The fluxes of 1%ciclopiroxe S-Gel containing one of the three enhancers, dodecylamine,
HPE-101 and oleic acid were 2.35, 2.24 and 2.12㎍/㎠/hr, respectively, comparing with 1.80㎍/㎠/hr of the control S-Gel without any enhancers.
From these results, this study demonstrated a good feasibility of a new dosage form, ciclopirox S-Gel for the treatment of cutaneous candidiasis, and other fungal skin infections, namely dermatophytosis and pityriasis versicolor.

[PE2-1] [10/19/2000 (Thr) 15:00 - 16:00 / [Hall B]]

IN VITRO METABOLISM OF A NEW PROTON PUMP INHIBITOR KR60436 IN RAT AND HUMAN LIVER MICROSOMES

Ji HY°1, Lee JW1 , Kim SB1, Lee HY1, Choi JK2, Lee DH3, Lim H3, Lee HS1

1College of Pharmacy, Wonkwang University, Iksan, 2Korea Research Institute of Chemical Technology, Daejeon, 3Dongbu Hannong Chemical Co., Daejeon, Korea

KR60436, 1-(2-methyl-4-methoxyphenyl)-4-[(2-hydroxyethyl)amino]-6-trifluoro methoxy-2,3-dihydropyrrolo-[3,2c]-quinoline is a new proton pump inhibitor under development for the treatment of gastric ulcer. The objectives of this study were to investigate the in vitro metabolism of KR-60436 in rat and human liver microsomes, and to identify the KR60436 metabolites.
KR60436 was incubated individually with male rat and human liver microsomes in the presence of NADPH generating system. Unchanged KR60436 plus five oxidized metabolites were profiled, and tentatively identified from the incubation using electrospray LC/MS and MS/MS techniques. Electrospray-MS and MS/MS analysis of unchanged KR60436 and its metabolites revealed intense protonated molecular ions and prominent as well as informative daughter ions for stuctural elucidation of metabolites. Four metabolic pathways are proposed for the formation of metabolites in both species: O-demethylation, N-dehydroxyethylation, hydroxylation and N-acetylation. OH-KR60436 (M1) and O-demethyl-KR60436 (M2) was major metabolites in rats and human, respectively. In conclusion, KR60436 is substantially metabolized in rat and human liver microsomes.

[PE2-2] [10/19/2000 (Thr) 15:00 - 16:00 / [Hall B]]

METABOLISM OF A NEW PROTON PUMP INHIBITOR DBM-819 by LC-MS/MS

Choi SJ°1, Ji HY1, Lee JW1 , Lee HY1, Choi JK2, Lee DH3, Lim H3, Lee HS1

1.College of Pharmacy, Wonkwang University, Iksan 2Korea Research Institute of Chemical