Preliminary Analysis of Haloperidol Population Pharmacokinetics in Patients with Psychosis

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　　To analyze the population pharmacokinetics of haloperidol in Korean patients with chronic psychosis, steady-state plasma haloperidol(HL) levels(n=264) were obtained in 110 patients through therapeutic drug monitoring. Blood samples were collected prospectively at different time of dosing interval in each patient and plasma HL levels were determened by HPLC. The computer program NONMEM was used to fit the measured HL levels with population pharmaacokinetic model which could predict the time course of steady-state plasma drug concentration. The mean population values of absorption rate constant(ka), volume of distribution(Vd/F), oral clearance(Cl/F) were 0.93 h, 32.L/kg, and 1.47L/kg/h and coefficient of their variations were 82.5%, 51.3% and 44.8%, respectively. The variation of residual error was 17.3%. Pharmacokinetic parameters of haloperidol seemed to be not influenced by age, sex, or duration of therapy.

　　Though this study was performed in limited number of patients, population pharmacokinetic data would be useful in determining the dosage regimen of haloperidol to achieve optimum haloperidol concentration.