



Pharmacokinetics of Lansoprazole Injection in Peptic Ulcer and Healthy Volunteers

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SUMMARY. The pharmacokinetics of lansoprazole after a single intravenous dose of 30 mg was determined in 10 healthy volunteers and 10 peptic ulcers patients. In this work, a liquid-liquid extraction and enrichment method with RP-HPLC determination route was taken with high sensitivity and low limit detection of 5 ng/mL. The concentration-time curves in the two groups were best fitted to a two-compartment model, but their main kinetic parameters were remarkably different between healthy and ulcers volunteers. The mean maximum plasma concentration (C_{max}) and area under the curve ($AUC_{0 \rightarrow t}$) were increased from 975.8 ng/mL to 1298.7 ng/mL and from 1439 ng-h/mL to 2301 ng-h/mL, respectively, and peak time (t_{max}) decreased from 0.36 h to 0.26 h. Meanwhile, the half life ($t_{1/2}$) prolonged from 2.25 h to 2.91 h and the clearance (CL) reduced from 20.04 L/h to 13.96 L/h. That variability of lansoprazole pharmacokinetic parameter indicates that ulcers have significant effect on its metabolic process.

KEY WORDS: High-performance liquid chromatography, Lansoprazole, Peptic ulcers, Pharmacokinetics.

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