



Effect of CYP2C9*3 mutant variants on meloxicam pharmacokinetics in a healthy Chinese population

M. Zhang, Y. Yang, G. Zhao, X. Di, L. Xu, N. Jiang, J. Xu and X. Xu

Department of Pharmacology, the Military General Hospital of Beijing PLA, Beijing, China

Corresponding author: M. Zhang
E-mail: may1008_zhang@yeah.net

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ABSTRACT. The aim of this study was to investigate the effect of the CYP2C9*3 (CYP2C9 1075 A>C) polymorphism on meloxicam pharmacokinetics in a Chinese population. Twenty-four healthy volunteers were enrolled in this study. The pyrosequencing technique was used to identify polymorphisms of CYP2C9. The concentration of meloxicam in plasma was determined by a high-performance liquid chromatography assay with mass spectrographic analysis. The Drug and Statistics Software (DAS, version 2.0) was used for curve fitting and calculations of pharmacokinetic parameters. The effects of CYP2C9*3 variant genotypes on meloxicam pharmacokinetics were compared with those of the wild type genotype. Among the 24 volunteers, two AC heterozygotes were observed in the multi-dose group. CYP2C9*3 was found to play an important role in the metabolism of meloxicam by reducing its enzymatic activity. Therefore, results of this study provide helpful information regarding inter-individual pharmacokinetic variability in the Chinese population.

Key words: Meloxicam; CYP2C9; Single nucleotide polymorphism; Genotyping