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Comparative pharmacokinetics of borneol in cerebral ischemia-reperfusion and sham-operated rats 冰片在中风及假手术大鼠体内的药代动力学研究

Key words: Borneol, Pharmacokinetics, Cerebral ischemia-reperfusion, Xingnaojing

关键词:冰片;药代动力学;脑缺血再灌注;醒脑静

- Objective: to investigate the pharmacokinetics of borneol in the pathological conditions of stroke and evaluate the pharmacokinetic differences of borneol caused by stroke after oral administration of borneol and Xingnaojing (XNJ).
- Methods: ischemia-reperfusion (IR) and sham-operated (SO) rats both contained pure borneol subgroup and XNJ subgroupst. After oral administration, plasma samples were collected and detected with a specific gas chromatographic system-flameionization detector method. The cerebral ischemia-reperfusion model was created by reversible middle cerebral artery occlusion (MCAO). The pharmacokinetic parameters were analyzed using non-compartmental methods with Kinetica.
- Results: compared with the SO rats after administration of borneol, the maximum plasma concentration (Cmax) and area under the curve (AUC) values in stroke rats significantly increased and the same phenomenon appeared after administration of XNJ. In the rats with the same physiological conditions, the Cmax and AUC had higher values in the borneol subgroup
- Conclusions: the pathological damages of ischemia-reperfusion have a significant impact on the pharmacokinetic traits of borneol and that there are some components in XNJ inhibiting the absorption of borneol.

