



统计矩法评价养阴通脑颗粒各有效部位配伍在脑缺血再灌大鼠中的药动学变化

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中文摘要:目的:应用总量统计矩法研究中复方养阴通脑颗粒主要有效部位的不同配伍对主要活性成分药动学参数的影响。方法:以养阴通脑颗粒中的主要有效部位生物碱、黄酮、皂苷、挥发油的质量控制标准-按正交试验法设计复方主要有效部位的配伍实验,在不同时间点上检测川芎嗪和葛根素的血药浓度,分别计算川芎嗪和葛根素在各配伍条件下的零阶矩和平均滞留时间,再计算葛根素和川芎嗪的总量零阶矩和总量平均滞留时间。应用正交分析法分析配伍对其药动学参数的影响。结果:黄酮对葛根素和川芎嗪的总量零阶矩影响最大,生物碱对葛根素和川芎嗪的总量平均滞留时间影响最大,皂苷对2个总量统计矩参数的影响都较小,而挥发油对2个总量统计矩参数的影响都较大,提示挥发油可能促进葛根素和川芎嗪在大鼠体内的代谢。结论:总量统计矩参数可用于指导中药复方的配伍研究。

中文关键词:养阴通脑颗粒;药物代谢动力学;总量统计矩;零阶矩(AUC);一阶矩(平均滞留时间 MRT);葛根素;川芎嗪

Value influence of different compatibilities of main active parts in Yangyintongnao granule on pharmacokinetics parameters in rats with cerebral ischemia reperfusion injury by total amount statistic moment method

Abstract: Objective: To study the influence of the different combinations of the main active parts in Yangyintongnao granule on the pharmacokinetics parameters of the two active components- ligustrazine and puerarin using the method of total amount statistic moment for pharmacokinetics. Method: Combinations were formed according to the dosages of the four active parts (alkaloid, flavone, saponin, naphtha) by orthogonal experiment $L_9(3^4)$. Blood concentrations of ligustrazine and puerarin were determined by HPLC at different time. Zero rank moment (AUC) and one rank moment (MRT, mean residence time) of ligustrazine and puerarin have been worked out to calculate the total amount statistic moment parameters was analyzed of Yangyintongnao granule by the method of the total amount statistic moment. The influence of different compatibilities on the pharmacokinetics parameters was analyzed by orthogonal test. Result: Flavone has the strongest effect than saponin on the total AUC. Ligustrazine has the strongest effect on the total MRT. Saponin has little effect on the two parameters, but naphtha has more effect on both of them. It indicates that naphtha may promote metabolism of ligustrazine and puerarin in rat. Conclusion: Total amount statistic moment parameters can be used to guide for compatibilities of TCM.

keywords: Yangyintongnao granule; pharmacokinetics; total amount statistic moment; zero rank moment (AUC); one rank moment (MRT); mean residence time; puerarin; ligustrazine

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