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醒脑静口服给药栀子苷在**Beagle**犬体内的药代动力学研究

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中文摘要:目的: 建立Beagle犬血浆中栀子苷的高效液相色谱分析方法,研究醒脑静口服给药后栀子苷的药代动力学特征及生物利用度。 方法: Beagle犬分别口服、注射给予醒脑静,采用HPLC测定Beagle犬血浆中栀子苷浓度,以Kinetica软件拟合,计算相关药动学参数。 结果: Beagle犬血浆中栀子苷在1.24~158.88 mg·L^{-1}线性关系良好,口服给药的主要药动学参数为C_{max}(11.8±0.6) mg·L^{-1},T_{max}(52.0±4.5) min,AUC(1 280.8±172.0) mg·min·L^{-1},MRT(118.7±25.4) min。注射给药的药动学参数为C_{max}(107.4±6.3) mg·L^{-1},AUC(7 930.1±670.0) mg·min·L^{-1},MRT(92.4±5.1) min。生物利用度为(6.46±0.87)%。 结论: 该实验建立的Beagle犬血浆中栀子苷的HPLC分析方法,适用性良好,提取、方法回收率和日内、日间精密度均符合要求,室温及冻融条件下稳定性良好。醒脑静口服给药栀子苷的生物利用度较低。

中文关键词:醒脑静 栀子苷 药代动力学 生物利用度

Pharmacokinetics and bioavailabilities of geniposide in Beagle dogs after oral administration Xingnaojing

Abstract: Objective : To establish a method for determination of geniposide in Beagle dogs plasma by high performance liquid chromatography (HPLC), and study the pharmacokinetics and bioavailability of geniposide in Beagle dogs after oral administration Xingnaojing. Method : To determine the geniposide in Beagle dogs plasma by HPLC after oral administration or intravenous injection Xingnaojing, and the pharmacokinetic parameters were calculated by the software of Kinetica. Result : The good linearity range of geniposide was 1.24-158.88 mg·L^{-1}. The main pharmacokinetic parameters after oral administration was as follows: C_{max}(11.8±0.6) mg·L^{-1},T_{max}(52.0±4.5) min,AUC(1 280.8±172.0) mg·min·L^{-1},MRT(118.7±25.4) min, and these parameters after intravenous injection was follows: C_{max}(107.4±6.3) mg·L^{-1},AUC(7 930.1±670.0) mg·min·L^{-1},MRT(92.4±5.1) min. The bioavailability of geniposide in Beagle dogs after oral administration Xingnaojing was (6.46±0.87)%. Conclusion : The HPLC method had good applicability. The extract recovery, method recovery, intra-day precision and inter-day precision of the method were all met the requirements. The stability in conditions of room temperature and freeze-thaw cycle was good. The results indicated that the oral administration bioavailability of geniposide was in low degree.

keywords: Xingnaojing geniposide pharmacokinetics bioavailability

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