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不同给药途径通窍散瘀方中葛根素在大鼠体内药动学研究

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中文摘要:目的: 研究通窍散瘀方经不同给药途径给药后葛根素在大鼠体内的药代动力学。 方法 :通窍散瘀方经注射给药(*iv*)、鼻腔给药(*in*)、灌胃给药(*ig*)后于不同时间点取血,以甲醇沉淀血浆蛋白质,反相高效液相色谱测定葛根素在大鼠血浆中的浓度,用Kineti ca程序软件计算药代动力学参数和生物利用度。 结果 :通窍散瘀方静脉注射后,葛根素血中$AUC_{0\sim120\ min}$为(787.99±70.44)mg·m in·L^{-1},鼻腔给药后$AUC_{0\sim120\ min}$为(376.56±93.93)mg·min·L^{-1},而灌胃给药后$AUC_{0\sim120\ min}$为(491.18±110.64)mg·min·L^{-1}。鼻腔给药葛根素绝对生物利用度F为47.78%,灌胃给药葛根素绝对生物利用度F为6.23%。 结论 :通窍散瘀方经鼻腔给药的生物利用度显著高于灌胃,该结果可以为通窍散瘀方的剂型研究和给药途径选择提供实验依据。

中文关键词:通窍散瘀方 葛根素 生物利用度 药代动力学

Study on pharmacokinetics of puerarin in rats following different methods of administration of Tongqiao Sanyu prescription

Abstract: Objective : To study pharmacokinetic of puerarin in rats following different methods of administration of Tongqiao Sanyu prescription. Method : Tongqiaosanyu prescription was administered to rats by caudal vein injection, nasal administration and oral administration. Plasma samples were extracted with methanol and the plasma concentration of puerarin was analyzed by RP-HPLC. The pharmacokinetic parameters and bioavailability were calculated with Kinetica software. Result : The main pharmacokinetic parameters were as follows: $AUC_{0-\infty}$ of caudal vein injection was (787.99±70.44) mg·min·L^{-1}; $AUC_{0-\infty}$ of nasal administration was(376.56±93.93) mg·min·L^{-1}; $AUC_{0-\infty}$ and oral administration (The dose was decuple higher than that of caudal vein injection and nasal administration) was (491.18±110.64) mg·min·L^{-1}. The absolute bioavailability of puerarin was 47.78% by nasal administration and 6.23% by oral administration. Conclusion : The bioavailability of nasal administration is higher than oral administration significantly, this result can provide some scientific foundantion for the method of administration and the reform of dosage form of Tongqiao Sanyu prescription.

keywords: Tongqiao Sanyu prescription puerarin bioavailability pharmacokinetics.

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