

论文

RP-HPLC法测定大鼠血浆的普鲁托品浓度及其药代动力学研究

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摘要:

关键词: 普鲁托品 反相高效液相色谱法 药代动力学

RP-HPLC METHOD FOR DETERMINATION OF PROTOPINE IN PLASMA AND PHARMACOKINETICS IN RATS

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Abstract:

AIM To develop a reversed phase high performance liquid chromatographic method (RP-HPLC) for determination of protopine (Pro) in rat plasma and to investigate the pharmacokinetics of Pro in rats. METHODS The column was packed with 5 μm C₁₈. The mobile phase (pH 5.6) was a mixture of methanol-water 10% acetic acid (80:20:2). After twice extracted with ether under basic condition, and reextracted with 0.02 mol·L⁻¹ sulfuric acid, protopine in the plasma samples was isolated well. The content of protopine in the plasma sample was measured by UV detector at 285 nm. RESULTS The lowest limit of detection was 50 ng·mL⁻¹. The intraday and interday precisions were 1.5%-3.0% and 2.1%-6.2%, respectively. The mean recovery was 80.6%-97.6%. A good linear relationship between the peak height and the concentration of protopine in rat plasma was observed. The pharmacokinetics of protopine had been investigated in rats after intravenous administration 10 mg·kg⁻¹. The concentration-time curve of protopine in rat was confirmed to two compartment open model. The T_{1/2α}, T_{1/2β}, K_e, CL, V_d were 0.05 h, 1.85 h, 1.52 h, 6.41 L·h⁻¹ and 17.27 L, respectively. CONCLUSION This method is suitable for studies on pharmacokinetics of protopine.

Keywords: RP-HPLC pharmacokinetics protopine

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