

论文

柱前衍生化反相HPLC法测定血浆中普罗帕酮的对映异构体

王亚芹;钟大放;陈仁弟

沈阳药科大学药物代谢与药物动力学实验室,沈阳110015

摘要:

建立了选择性测定血浆中普罗帕酮对映异构体的柱前衍生化反相HPLC法。用S(+)-1-(1-萘基)乙基异氰酸酯为衍生化试剂,与血浆中提取出的普罗帕酮反应生成非对映立体异构体,以HPLC-UV检测法(220nm)定量。采用此法成功地测试了10名健康受试者单剂量口服300mg盐酸普罗帕酮片后对映异构体的药代动力学曲线。此法灵敏度高(7.5ng·ml<sup>-1</sup>),操作简便,重现性好。

关键词: 普罗帕酮 对映异构体 衍生化 HPLC法

A REVERSED PHASE HPLC METHOD WITH PRE-COLUMN DERIVATIZATION TO DETERMINE PROPAFENONE ENANTIOMERS IN HUMAN PLASMA

Wang Yaqin; Zhong DafangF and Chen Rendi

Abstract:

A reversed phase HPLC method to stereoselectively determine enantiomers of propafenone in human plasma has been developed. After extraction of 1 ml plasma with 3 ml of n-C<sub>6</sub>H<sub>14</sub>:CH<sub>2</sub>Cl<sub>2</sub>:2-C<sub>3</sub>H<sub>7</sub>OH (100:50:5, v/v) and dried under N<sub>2</sub>, the enantiomers of propafenone were allowed to react with homochiral S(+)-1-(1-naphthyl) ethyl isocyanate (5.66 μg in 60 μl CH<sub>2</sub>Cl<sub>2</sub>) at RT for 30 min, to give the diastereomeric derivatives. Their separation was achieved using HPLC with a C<sub>18</sub>-column and UV-detection (220 nm) and the enantiomeric ratios were measured. The concentrations of each enantiomer were then calculated using the enantiomeric ratios and the racemic propafenone concentrations previously measured. This method after validation procedures has been applied to the multisample analyses of a human pharmacokinetic study with 10 healthy volunteers after an oral dose of 300 mg propafenone hydrochloride. The method was shown to be sensitive (7.5 ng·ml<sup>-1</sup>), convenient and reproducible.

Keywords: Enantiomers Derivatization HPLC method Propafenone

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作者简介:

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