药学学报 1986, 21(9) 692-697 DOI: ISSN: CN:

论文

高效液相色谱法测定炎痛喜康血药浓度及人体药物动力学参数

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摘要:

本文建立了用高效液相色谱法测定人体内炎痛喜康血药浓度的分析方法,以YWG-C_{18}化学键合相(10μm)为固定相,以0.2 M醋酸铵—甲醇(1:1 V/V)为流动相,非那西汀为内标,使用国产HPLC仪,UV 254 nm检测器,得出检出限为5 ng,最低检测浓度为0.05μg/ml血清,线性范围为0.1～10μg/ml,方法回收率为99.28%。本法简便、重现性好、专一性强。健康志愿者口服炎痛喜康20 mg一片后,用本法测定得到的药动学参数与文献报道值接近。

关键词: 炎痛喜康 高效液相法 药物动力学

HPLC DETERMINATION OF PIROXiCAM IN HUMAN SERUM AND ITS PHARMACOKINETIC PARAMETERS

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Abstract:

A HPLC method for determination of piroxicam in serum and application of this method to piroxicam disposition studies in man were described. The piroxicam was extracted from acidified serum with diethyl ether using phenacetin as internal standard. A RP YWG-C18 (10μm) column fitted with a 254 nm UV detector was used for analysis; the mobile phase was 0.2 M acetate buffer-methanol (1:1 v/v). The sensitivity of the method was 0.05 μg/ml serum. Assay linearity was demonstrated over the range of 0.1～10 μg/ml of serum with a regression coefficient of 0.9998. The assay recovery was 99.28%, and no interferences were found from endogenous compounds or other commonly used antiinflammatory agents. For the serum concentration following oral administration of piroxicam tablet to healthy volunteers (n=10), the best fit was found to be with a one compartment model. After administration of 20 mg dose, the parameters, which were close to the data reported in literature, were as follows: T_m=4.19 h, C_m=2.8760μg/ml, AUC=144.064 μg.h.ml^{-1}, T 1/2 (K_A)=0.75h, T 1/2 (K_B)=40.57 h. The long half-life of piroxicarn in man suggests that one-daily dosing may be appropriate for maintaining therapeutic serum levels.

Keywords: HPLC Pharmacokinetics Piroxicam

收稿日期 1985-09-03 修回日期 网络版发布日期

DOI:

基金项目:

通讯作者:

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