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眼组织中缓释地塞米松药膜的HPLC/MS/MS测定方法研究

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摘要 眼部手术后 ,在眼组织的前房中植入缓释地塞米松药膜以防术后感染。本实验采用液液萃取、液固萃取的方法来提取生物样品中的地塞米松药物 ,经液相色谱 /质谱 /质谱进行检测 ,样品中药物浓度在 1 0 8— 54μg/L范围内呈现良好的线性 (γ2 =0 .9995) ,最低检测浓度为 0 4 μg/L ,平均回收率大于 77%。用这一方法可高灵敏度、高选择性地应用于临床相关药物的动力学研究

关键词 地塞米松 液相色谱/质谱 临床药物检测

分类号

Quantitative Analysis of Dexamethasone in Eyes by Liquid Chromatography/MASS/MASS

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Abstract To prevent the inflammation in the anterior chamber,topical antibiotic and corticosteriods(such as dexamethasone、cefuroxime etc)are often used after the surgery.A method combining liquid chromatography (LC) with tandem mass spectrometry(MS/MS)was developed to quantify dexmethasone in aqueous humor and plasma.Before narrow-bore LC/MS/MS analysis,aqueous humor was performed by liquid -liquid extraction,and plasma was extracted by solid-phase extraction.Prednisone was used as an internal standard.The standard curve was composed of six points ranging from 1.08 to 54μg/l(averageγ 2=0.9995).Limits of detection was 0.4μg/l Imprecision was <5% across the therapeutic range.Dexmethasone recovery averaged over 77% With its high sensitivity and specificity,this LC/MS/MS method presents a valuable tool for metabolism studies.

Key words dexmethansone,high performance liquid chromatography/tandem mass spectrometry,therapeutic drug monitoring

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