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论文

罗红霉素在犬体内的代谢转化罗红霉素在犬体内的代谢转化

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摘要：

目的考察罗红霉素在犬体内的代谢转化及*po*和iv给药途径对药物代谢的影响。方法采用液相色谱-质谱(LC-MS^n)联用技术,检测在iv或*po*给予单剂量罗红霉素后犬胆汁中的罗红霉素及其代谢物。代谢物经LC/MS^n方法分离和分析,并通过与对照品比较质谱和色谱行为确定其结构。结果共检测到13种罗红霉素代谢物,包括*N*-去甲基和*N, N*-双去甲基衍生物、肟醚侧链*O*-去烷醚基衍生物、脱红霉糖衍生物、罗红霉素及其代谢物的*Z*式几何异构体衍生物。结论罗红霉素在犬体内主要经历4种代谢途径;罗红霉素及其代谢物的几何异构与脱红霉糖代谢在口服和注射两种给药途径间存在显著的差异。

关键词： 罗红霉素 液相色谱-质谱 代谢 几何异构 犬胆汁

Metabolism of roxithromycin in dogs

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Abstract:

AimTo investigate the metabolic profile of roxithromycin in dogs and the effects of oral and intravenous administrations on the metabolism of roxithromycin. MethodsLiquid chromatography-tandem mass spectrometry (LC-MS^n) was used for separation and analysis of roxithromycin and its metabolites in dog bile after an oral dose or intravenous dose of roxithromycin. The metabolites were identified by comparisons of their mass spectra and LC behaviors with the references. ResultsTotally 13 metabolites were detected in dog bile, including *N*-demethylated derivatives, *N, N*-didemethylated derivatives, *O*-dealkylether derivatives, decladinose derivatives, and the geometric isomers of parent drug and its metabolites. ConclusionRoxithromycin underwent 4 metabolic pathways in which geometric isomerization and decladinose metabolism were found to be markedly different between the two administration routes.

Keywords: liquid chromatography-mass sqectrometry metabolism geometric isomerization dog cile roxithromycin

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