Pharmacokinetics and Heart Distribution Study of Hypaconine in Rats by UPLC-MS/MS

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SUMMARY. Hypaconine is a cardioactive aminoalcohol-diterpenoid alkaloid in the lateral roots of Aconitum carmichaeli Debx. (Fuzi). Here we firstly report the development and validation of a simple and selective ultra-performance liquid chromatography tandem mass spectrometry (UPLC-MS/MS) method to determine hypaconine in rat plasma and heart to investigate the pharmacokinetic feature, bioavailability and heart distribution. Precipitation of protein with methanol was used as sample preparation. The method was validated in the range of 20-5000 ng/mL and then successfully applied to the determination of hypaconine in rat plasma and heart for pharmacokinetics and heart distribution study after administration of hypaconine.

KEY WORDS: heart distribution, hypaconine, pharmacokinetics, rat plasma, UPLC-MS/MS.

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