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Abstract

Ethnopharmacological relevance:

Baoyuan decoction (BYD), a traditional Chinese medicine (TCM) formula, is composed of four herbs and widely used with western drugs to treat coronary heart disease, aplastic anemia and chronic renal failure in clinic. However, no study of the effect of BYD on the cytochrome P450 (CYP) activities has been reported.

Aim of the study:

The purpose of the present study was to evaluate the potential influences of BYD on the activities of seven CYP isozymes (CYP1A2, 2B6, 2C9, 2C19, 2D6, 2E1, and 3A4) in rats.

Materials and methods:

A sensitive and selective UPLC-MS/MS method for simultaneous determination of seven probe drugs and internal standard (IS) in rat plasma was developed and validated. The influence of BYD on the activities of CYP isozymes and mRNA expression levels were carried out by comparing plasma pharmacokinetics and real-time reverse transcription-polymerase chain reaction (RT-PCR) of probe drugs between control and BYD treatment groups respectively.

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