

ABSTRACT

Huang-Lian-Jie-Dwu-Tang (HLJDT), a traditional Chinese medicine formulation containing *Coptidis Rhizoma*, *Scutellariae Radix*, *Phellodendric Cortex* and *Gardeniae Fructus*, are widely used in the treatment of bacillary dysentery and jaundice.

In this study, a high-performance liquid chromatographic method for determination of berberine, baicalin and geniposide in rabbit blood. An VERCOPAK Intersil ODS-2 (4.6×150mm) column with the mobile phase consisted of solvent A (100% CH₃CN), and solvent B (H₂O-H₃PO₄ pH=2.6) was used. The 1 ml/min gradient was follow: 0-19 min, solvent A (84%)-solvent B (16%); 20-30 min, solvent A (78%)-solvent B (22%); 31-42 min, solvent A (70%)-solvent B (30%). The internal standard was m-hydroxybenzoic acid. The monitoring wavelength was: 0-18 min, 240 nm; 19-42 min, 277 nm.

After IV administration of the HLJDT to the rabbits, the plasma level-time profiles of berberine, baicalin and geniposide were adequately described by an open two-compartment model. The elimination half-lives of baicalin was prolonged (118.05±29.90 vs 80.79±17.16 minutes), berberine (60.64±1.29 vs 64.85±5.58 minutes) and (51.22±18.83 vs 54.97±11.98minutes) geniposide were not different clearly by compared with that of pure berberine, baicalin and geniposide injection after IV administration.

The absolute bioavailability of berberine, baicalin and geniposide after oral administration of the HLJDT were 6.88, 7.27 and 10.33 % respectively. This result suggests that repeated dose is necessary for HLJDT when in clinical use.