

款冬花及其总生物碱的肝脏毒性

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作者	单位	E-mail
回连强	中国中医科学院中药研究所,北京 100700	
高双荣	中国中医科学院中药研究所,北京 100700	
刘婷	中国中医科学院中药研究所,北京 100700	1tbit@163.com
李春英	中国中医科学院中药研究所,北京 100700	
郝然	中国中医科学院中药研究所,北京 100700	
易艳	中国中医科学院中药研究所,北京 100700	
郭静	中国中医科学院中药研究所,北京 100700	
贺蓉	中国中医科学院中药研究所,北京 100700	
曹春雨	中国中医科学院中药研究所,北京 100700	
赵雍	中国中医科学院中药研究所,北京 100700	
梁爱华	中国中医科学院中药研究所,北京 100700	
张毅	中国中医科学院中药研究所,北京 100700	

基金项目:国家科技部重大专项(2009ZX09301-005-08); 国际科技合作项目(2006DFA31760);中国中医科学院自选课题(2006年度)

中文摘要:目的:对款冬花的肝脏毒性进行初步的研究探讨。方法:昆明种小鼠 ig 款冬花水煎液生药 $20, 40 g \cdot kg^{-1}$ 连续4周,测定血清丙氨酸氨基转移酶(ALT),门冬氨酸氨基转移酶(AST)活性,肝组织称重,计算肝脏系数,观察肝脏病变情况并评分;利用精密肝切片培养技术,将款冬花水煎液 $0.005, 0.05 g \cdot L^{-1}$ 和总生物碱 $0.5, 2.0 g \cdot L^{-1}$ 与肝切片分别共同培养24,6 h后,制备肝组织匀浆,BCA法测定匀浆液中蛋白含量,连续监测法测定并计算每毫克蛋白中ALT,AST,乳酸脱氢酶(LDH), γ -谷氨酰胺转移酶(GGT)的漏出率。结果:款冬花水煎液 $40 g \cdot kg^{-1} ig$ 4周后,镜下观察雌性动物款冬花水煎液组与对照组比较有明显病理改变,且伴有肝脏系数的明显增加;款冬花水煎液及总生物碱与肝切片共培养后,水煎液2个剂量组均能引起ALT漏出率的显著升高;总生物碱 $0.5 g \cdot L^{-1}$ 组能引起肝切片LDH,ALT漏出率显著升高, $2.0 g \cdot L^{-1}$ 组能引起肝切片GGT漏出率显著升高,蛋白含量显著下降。结论:款冬花体内体外试验均显示出一定的肝脏毒性。

中文关键词:[款冬花](#) [总生物碱](#) [肝脏毒性](#) [精密肝切片](#)

Hepatotoxicity on Water Extracts and the Total Alkaloid of Farfarae Flos

Abstract:Objective: To study the hepatotoxicity of Farfarae Flos. Method: KM mice were given the water extracts of Farfarae Flos orally in $20, 40 g \cdot kg^{-1}$ doses for successive 4 weeks, enzyme activity of aspartate transaminase (AST), alanine transaminase(ALT) in serum of mice were measured, coefficient of liver were calculated, and liver histopathology examination were conducted. Using the precision-cut slice technology, culture liver slices for 24 hours with water extracts in concentration $0.005, 0.05 g \cdot L^{-1}$ and 6 hours with the total alkaloid of Farfarae Flos in concentration $0.5, 2.0 g \cdot L^{-1}$, the slice homogenate were prepared, protein concentration were detected by BCA protein assay method, enzyme activity of ALT, AST, lactate dehydrogenase(LDH), γ -glutamyl transpeptidase (GGT) were detected by enzyme kinetics method and leakage were calculated. Result: The water extract of Farfarae Flos $40 g \cdot kg^{-1}$ dose group of female had significant histopathology changes and organ coefficient of liver increased compared with control group. After co-culture for 24 hours with water extracts of Farfarae Flos , ALT leakage were significantly increased in two groups; LDH and ALT leakage were significantly increased with final concentration $0.5 g \cdot L^{-1}$, GGT leakage was significantly increased and protein content was obviously decreased with final concentration $2.0 g \cdot L^{-1}$ after co-culture for 6 hours with the total alkaloid of Farfarae Flos .

Conclusion: Farfarae Flos displayed liver toxicity in some degree for *in vivo* and *in vitro* experiments.

keywords: [Farfarae Flos](#) [total alkaloid](#) [hepatotoxicity](#) [precision-cut liver slice](#)

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