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沙棘籽油对四氯化碳肝损伤的保护作用研究

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摘要： 目的研究沙棘籽油对四氯化碳(CCl₄)引起的大鼠化学性肝损伤的保护作用,探讨其对CCl₄肝损伤起保护作用的有效剂量。方法实验用健康雄性成年SD大鼠(180~220g)72只,随机分为空白对照组、溶剂对照组、CCl₄模型对照组和3个沙棘籽油实验组(0.167,0.333和0.500g/kg体重)。沙棘籽油以食用花生油稀释至所需浓度,灌胃给予动物(2ml/kg体重),空白对照组给予等体积蒸馏水灌胃,溶剂和模型对照组给予等体积花生油灌胃。于实验第45天将各组动物隔夜禁食16h,模型组及受试样品组一次灌胃给予CCl₄(200mg/kg体重),24h后处死动物,股动脉取血分离血清,测定血清ALT、AST水平,并取肝脏进行病理组织学检测。结果与CCl₄模型对照组相比,沙棘籽油各剂量组大鼠血清ALT、AST均明显降低(2419±1335),(2832±1074),(2424±955),(4396±3026),(4579±990),(5106±1479),(4503±782),(21861±14291)nmol·s⁻¹·L⁻¹(P<0.05);病理组织学检查结果显示,沙棘籽油高剂量组(0.500g/kg体重)大鼠肝细胞水样变性和坏死程度以及总病变计分明显减轻(136.0±47.0vs288.0±70.0,P<0.05),而中、低剂量组差异无统计学意义。结论沙棘籽油对CCl₄造成的肝损伤具有明显保护作用,本实验中得出的有效剂量为0.500g/kg体重。

关键词： [沙棘籽油](#) [四氯化碳](#) [肝损伤](#)

Hepatoprotective effect of Hippophae rhamnoides seed oil on the CCl₄-reduced injuries

XU Mei-hong,WANG Na,ZHANG Liang,ZHANG Wei-ru, LONG Zhu,LIANG Xue-jun,LIU Yi,WANG Jun-bo.Hepatoprotective effect of Hippophae rhamnoides seed oil on the CCl₄-reduced injuries[J].China Preventive Medicine,2010(5):513-516.

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Abstract: Objective To study the protective effect of hippophae rhamnoides seed oil on carbon tetrachloride (CCl₄)-induced hepatic injuries and to explore its effective dose.Methods Seventy-two male SD rats were randomly divided into 6 groups : negative control,solvent control,CCl₄ model, and low- (0.167 g/kg bw), mid- (0.333 g/kg bw) and high-hippophae rhamnoides seed oil (0.500 g/kg bw) treatment group.Rats in hippophae rhamnoides seed oil group were given different dosage of hippophae rhamnoides seed oil by gavage once a day,while rats in negative control group were given distilled water,and rats in solvent control and CCl₄ model group were given peanut oil respectively with the same manner.After 45 days,rats in CCl₄ model group and hippophae rhamnoides seed oil groups were fasted for 16 h and then given one-time CCl₄ (200 mg/kg bw) by gavage.Rats were euthanized twenty-four hours later after the treatment.The serum ALT and AST of rats were tested with an automatic biochemical analyzer for all the groups.The liver weight,coefficient and histopathology examination were evaluated by regular methods.Results The serum concentrations of ALT and AST were significantly lower in rats treated with the low-,mid-and high-dosage of hippophae rhamnoides seed oil than those in rats of CCl₄ model group (2419±1335,2832±1074,2424±955,4396±3026,4579±990,5106±1479,4503±782,21861±14291 nmol·s⁻¹·L⁻¹ (P<0.05)).The CCl₄-induced hepatocyte injuries were alleviated significantly in the group of rats treated with 0.500 g/kg bw hippophae rhamnoides seed oil (136.0±47.0 vs 288.0±70.0) (P<0.05).Conclusion Hippophae rhamnoides seed oil protected rats from CCl₄-induced acute hepatic injuries effectively with the dose of 0.5 g/kg bw.

Keywords: [Hippophae rhamnoides seed oil](#) [Carbon tetrachloride](#) [Hepatic injury](#)

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