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荜茇提取物对地鼠脂质代谢紊乱的影响

Effects of Extracts of *Piper Longum* on the Disorder of Lipid Metabolism in Hamsters

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中文关键词： 荜茇提取物 高血脂症 血脂 肝脂质

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作者	单位	E-mail
陆景坤，包雪梅，包勒朝鲁，那生桑，徐佳枫，张瑞星	内蒙古医学院，呼和浩特 010010	lujingkun909@sina.com

中文摘要:

目的 研究荜茇提取物对高血脂症地鼠血脂的影响。方法 给予高脂饲料建立金黄地鼠高血脂模型，将动物随机分为正常对照组、模型组、辛伐他汀组、荜茇提取物组、去胡椒碱荜茇提取物组，除正常对照组外其余各组均给予高脂饲料喂养2或4周，每周测量体质量，分别在第2周末和第4周末用全自动生化分析仪检测血清总胆固醇(TC)、甘油三酯(TG)、高密度脂蛋白(HDL)、低密度脂蛋白(LDL)、肝脏指数、肝脂质TC和TG。结果 与正常对照组比较，模型组TC，TG 和LDL显著增加(*P*<0.01)，HDL显著降低；与模型组比较，荜茇提取物组在第2周和第4周均能显著降低TC，TG 和LDL，显著升高HDL(*P*<0.05或*P*<0.01)；去胡椒碱荜茇提取物组在第2周能显著降低LDL，升高HDL，在第4周有降低TC，TG，LDL的趋势，但差异无统计学意义，能显著升高HDL(*P*<0.05)；各受试物组动物在前两周体质量显著低于模型组，而后2周差异无统计学意义；4周时荜茇提取物组能显著降低肝脂质TC，TG；各受试物组均能显著降低肝指数。结论 荜茇提取物可显著改善高血脂症地鼠血脂水平，其中胡椒碱为其主要有效成分，且与其他各成分有协同降血脂作用。

英文摘要:

OBJECTIVE To explore the effects of extracts of *Piper longum* on golden hamster models of hyperlipidemia. METHODS The disorder of lipid metabolism was induced by feeding with high-cholesterol diets. The hamsters were randomly divided into normal control group, hyperlipidemia model group, extracts of Piper longum group, removal of piperine group and sinvastatin positive control group. The later 4 groups of hamsters were fed with high-cholesterol diets in addition to the normal control for 2 or 4 weeks. The weights of all groups were measured. Total cholesterol (TC), triglycerides (TG) concentrations in the serum and the liver and low density lipoprotein cholesterol (LDL-C), high density lipoprotein cholesterol (HDL-C) in the serum concentrations were detected by auto-biochemistry analyzer. The liver indexes were determined. RESULTS Compared with normal control, model group significantly increased TC, TG, LDL-C (*P*<0.01) and obviously decreased HDL-C. Compared with model group, extracts of Piper longum group could significantly reduce TC, TG, LDL-C and significantly increase HDL-C in the end of 2 weeks and 4 weeks(i>P<0.05 or i>P<0.01). Except removal of piperine group could notably decrease LDL-C and increase HDL-C in the end of 2 weeks, the contents of TC, TG, LDL-C of removal of piperine group were lower than the model group in the other time, but there were no significant differences, and the HDL were higher than the model group(i>P<0.05). In the first two weeks, compared with the model group, the weight of tested groups significantly higher, but there was no significant difference after two weeks. Extracts of *Piper longum* group could obviously decrease the contents of liver lipid. The tested groups could notably decrease liver index. CONCLUSION The extracts of *Piper longum* could adjust the disorder of lipid metabolism in hamster models of hyperlipidemia, and piperine is the main active ingredient, moreover, there is a synergistic effect between piperine and other components in extracts of *Piper longum*.

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电话：0571-87297398 传真：0571-87245809 电子信箱：xdyd@chinajournal.net.cn
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