[1]甄永占,胡刚,章广玲,等.赖氨大黄酸对快速老化小鼠SAMP 10肾组织COL1A1、COL3A1和COL4A1表达的影响[J].第三军医大学学报,2013,35(17):1805-1808.

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Title: Effect of rhein lysinate on expression of COL1A1, COL3A1 and COL4A1 in renal tissues of SAMP 10 mice

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关键词: 赖氨大黄酸; SAMP 10快速老化小鼠; 肾间质纤维化; 抗衰老

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摘要: 目的　研究赖氨大黄酸（rhein lysinate，RHL）对快速老化小鼠（senescence accelerated mouse prone 10, SAMP 10)肾组织Ⅰ型胶原α1链（COL1A1）、Ⅲ型胶原α1链（COL3A1）和Ⅳ型胶原α1链（COL4A1）蛋白表达的影响。　方法　选取7月龄SAMP 10小鼠18只，并根据随机数字表分为空白对照组、低剂量RHL组（25 mg/kg）和高剂量RHL组（50 mg/kg），每组6只；另选抗快速老化小鼠（senescence accelerated mouse resistance 1, SAMR 1) 6只作为青年对照，给药时间6个月。采用HE染色观察肾脏组织病理改变，Masson 染色观察肾脏组织纤维化改变，Western blot方法检测肾组织COL1A1、COL3A1、COL4A1和NF-κB蛋白的表达。　结果　与SAMP 10空白对照组相比，25和50 mg/kg RHL组治疗后 SAMP 10小鼠精神状态、活动度、毛色等方面较好；肾脏指数升高。HE 染色显示SAMP 10空白对照组小鼠肾组织有节段性肾小球萎缩、硬化和明显的间质纤维化，SAMR 1组和RHL组小鼠则无肾小球萎缩、硬化和明显的间质纤维化。RHL能够抑制SAMP 10小鼠衰老过程中出现的肾组织

COL1A1、COL3A1和NF-κB蛋白过度表达(P<0.05)。　结论　RHL 可通过抑制COL1A1、COL3A1和NF-κB蛋白过度表达，减轻衰老过程中SAMP 10小鼠肾组织纤维化程度，发挥肾脏保护作用。

Abstract: Objective To investigate the effect of rhein lysinate (RHL) on the expression of COL1A1, COL3A1, and COL4A1 in mouse the renal tissues of senescence accelerated mouse prone 10 (SAMP 10) strains. Methods Eighteen male SAMP 10 mice of seven months old were randomly divided into a blank control group, a low-dose RHL group (25 mg/kg) and a high-dose RHL group (50 mg/kg) (n=6), and 6 mice of senescence accelerated mouse resistance 1 (SAMR 1) were selected as a young control group. After 6 months treatment, HE staining was used to detect the pathological changes of kidney, and Masson staining was used to detect the fibrosis of kidney. The expression levels of COL1A1, COL3A1, COL4A1 and NF-κB were detected by Western blotting. Results The mental state, activity, and fur were better in the RHL groups (25 mg/kg and 50 mg/kg) than in the blank control group. Compared with the blank control group, the kidney index was improved in the RHL groups. Contracted and destroyed renal glomeruli, and renal interstitial fibrosis were observed in the blank control group rather than in the young control group and RHL groups. RHL inhibited the overexpression of COL1A1, COL3A1 and NF-κB in the renal tissues of SAMP 10 mice during aging (P<0.05). Conclusion RHL can decrease the interstitial fibrosis of kidney and protect kidney in SAMP 10 mice during aging by inhibiting the overexpression of COL1A1, COL3A1 and NF-κB in the renal tissues.

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