[gw22-e0230]

MONASCUS-FERMENTED RICE EXTRACT REDUCED BLOOD LIPID LEVEL AND INHIBITED THE MRNA EXPRESSION OF NF-ΚB AND MMP-9 IN AORTA OF APOLIPOPROTEIN E GENE KNOCKED-OUT MICE

Min Wu[1], Longtao Liu[2], Wengao Zhang[31]Guang'anmen Hospital China Academy Of Chinese Medical Sciences, Beijing, China; [2]Xiyuan Hospital China Academy Of Chinese Medical Sciences, Beijing, China; [3]Shandong University Of Tcm, Ji'nan, China

10.1136/heartjnl-2011-300867.155

Objective To study the effect of Monascus-fermented rice extract (RMRE) on blood lipid level, mRNA expression of NF-κB and MMP-9 in aorta of apolipoprotein E gene knocked-out (ApoE (-/-)) mice.

Methods 24 six-week old ApoE (-/-) mice were assigned randomly into model group (administrated with saline, 0.4 ml/d), RMRE group (administrated with RMRE, 120 mg/kg/d), Lovastatin group (administrated with Lovastatin, 3.3 mg/kg/d) and Xuezhikang group (administrated with Xuezhikang, 120 mg/kg/d). After 34 weeks of intervention, the blood serum was separated to assay the level of blood TC, TG, LDL-C and HDL-C; and then aortas were fixed with 2.5% Glutaraldehyde, to observe the mRNA expression of NF-κB and MMP-9 in aorta with hybridisation in situ.

Results Compared with model group, blood TC, TG, HDL-C and LDL-C in all the treatment groups reduced significantly ($p<0.05$ or $p<0.01$), and there was no significant difference among them. It manifested with hybridisation in situ, mRNA expression rates of NF-κB and MMP-9 in administrative groups are lower than that of model group, $p<0.01$. Observation with optical microscope showed, in model group there were excessive positive cells and the pigmentation of brown granules was deep; in RMRE group, Lovastatin group and Xuezhikang group, positive cells could also be seen but much fewer than that of model group and the pigmentation of brown granules was even.

Conclusion Monascus-fermented rice extract has a definite effect on reducing blood lipid level, inhibiting mRNA expression of NF-κB and MMP-9 in aorta of ApoE (-/-) mice, and this might be one of its mechanisms in anti-atherosclerosis and increasing plaque stability.