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IMMUNE INJURY COMBINED WITH HIGH FAT DIET LED TO THE FORMATION OF ATHEROSCLEROSIS OF THE ANALYSIS OF RELEVANT FACTORS ON RABBIT

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Aim To analyse serum factors of experimental atherosclerosis of rabbit induced by immunologic injury and high fat diet by multiple linear stepwise regression. To discuss the risk factors and the relationship with atherosclerosis model from lipid

metabolism, inflammation mediators, platelet function and vasoactive factors.

Methods Japanese white rabbit, intravenously injected bovine serum albumin (250 mg/kg), feeding high fat diet after injection, seven days later, injected again bovine serum albumin (250 mg/kg), 72 days later, obtaining blood from central artery of rabbit ears to determine Lipid level, apolipoprotein, interleukin 6, interleukin 8, high sensitivity-C reactive protein (hs-CRP), platelet aggregation (PaGT), endothelin (ET), calcitonin gene-related peptide (CGRP), rennin angiotensin (RA), angiotensin (Ang), thromboxane B_2 (TXB_2), 6-keto-prostaglandin (6-Keto-PGF1a) (radioimmunity), and nitrogen monoxidum (NO) (enzymic method). Lastly, measured the atherosclerosis plaque sizes of rabbit.

Results After 72 days, determined serum factors and compared the relationship with plaque size of aorta. All the items of model group increased or decreased obviously compared with control group. Due to exogenous high fat intake, lipid metabolism of model group was abnormal and vasoactivity was high. Otherwise, the levels of IL-6 and 8, apoA, apoB, ET, Ang, RA, platelet aggregation and TXB_2 were significantly higher than those of control group ($p<0.01$, $p<0.05$), and all of those showed positive correlation with plaque size by multiple linear stepwise regression analysis. NO and 6-Keto-PGF1a in the serum decreased in the model group and showed negative correlation with plaque size.

Conclusions Atherosclerosis resulted in blood state, immunity and metabolism chaos and hyperplasia abnormality. Set significance level=0.1, according to correlation coefficient, high density lipoprotein-cholesterol (HDL-C), ApoB, low density lipoprotein-cholesterol (LDL-C), ApoA, triglyceride (TG), ET, hs-CRP, TXB_2, Angand NO were correlated with plaque size/endothelial size in order.