**ABSTRACTS**

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**SIMVASTATIN PREVENT RABBIT ARTERIAL ATHEROSCLEROSIS DEVELOPMENT THROUGH INTERFERING NUCLEAR FACTOR-κB ACTIVATION**

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Li Xiaoyan, Zhang Erhong, Qu Caihong, Zhang Ping, The Third Affiliated Hospital of Sun Yat-sen University

**Objectives** To explore the effects of simvastatin on NF-κB activation in cholesterol diet rabbit artery and the underlying mechanisms of the beneficial effects of simvastatin on atherosclerosis (AS).

**Methods** Twenty-four male rabbits were randomly divided into three groups: normal diet groups, cholesterol diet groups and the simvastatin groups which received both cholesterol diet and simvastatin 5 mg/kg/days intragastrically. After 16 weeks rabbits were executed and the aortas were harvested for the pathologic and morphologic observations. Western blot was used to determine cytoplasmic p-I-κBα, I-κBα protein expression and cytoplasmic and nuclear NF-κB p65 protein expression of rabbit aortas.

**Results** Compared with normal diet groups, cholesterol diet groups demonstrated remarkably atherosclerosis in the arteries. And the expression of cytoplasmic p-I-κBα and nuclear NF-κB p65 expression was obviously increased, but I-κBα was markedly decreased in cholesterol diet groups (n=6; p<0.01). However, simvastatin could dramatically inhibit the formation of atherosclerotic plaques, suppress p-I-κBα protein expression, increase I-κBα protein expression, and promote NF-κB p65 translocation from cytoplasm to the nucleus (n=6; p<0.01).

**Conclusions** NF-κB activation might be involved in the process of atherosclerosis in high cholesterol diet rabbits. Simvastatin could ameliorates atherosclerosis (AS) through interfering NF-κB activation and translocation.