

عنوان مقاله:

Amlodipine Ameliorates Up-Regulation of ET-1 in Left Ventricle of Hypercholesterolemia Rabbits

محل انتشار:

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خلاصه مقاله:

Objective(s) In addition to antihypertensive effects, amlodipine may exhibit cardiovascular protective effects in heart tissue. The aim of this study was to evaluate the effects of amlodipine and/or high cholesterol diet on blood, heart tissue concentration and mRNA expression of endothelin-1 (ET-1) in male New Zealand white rabbits. **Materials and Methods** A total of 40 male New Zealand rabbits were divided into four groups: the normal control group, normal group receiving amlodipine, high-cholesterol diet group and high-cholesterol diet with amlodipine group. After 8 weeks, all the animals anesthetized and blood or tissues samples were collected. **Results** After 8 weeks of a high cholesterol diet, the group with such a diet had a significantly higher ratio of left ventricle (LV) weight to body weight than the control group ($P=0.0001$). After treatment with amlodipine for 8 weeks, ET-1 level was reduced considerably in comparison with the control ($P=0.01$) and high-cholesterol diet groups ($P=0.01$). Amlodipine consumption caused significant reduction ($P=0.01$) in the level of ET-1 in heart tissues of high-cholesterol diet group but it had no remarkable effect on the reduction of heart tissue ET-1 in amlodipine group compared with the control group. **Conclusion** The present study demonstrates that ventricular prepro-ET-1 mRNA quantitatively increases in the high-cholesterol diet rabbits which results in development of ventricular hypertrophy. It seems that the treatment with amlodipine retards the progression of LV hypertrophy through attenuation of ET-1 levels independent of lipid changes.

کلمات کلیدی:

Amlodipine, Endothelin-1, Hyperlipidemias, Hypertrophy, Rabbits

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