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论文

间硝苯地平对DOCA-satl 高血压大鼠心肌膜碎片二氢吡啶结合位点的影响

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摘要：

用 DOCA-salt 高血压大鼠心肌肥厚模型，观察间硝苯地平（*m*-Nif）对肥厚心肌膜碎片二氢吡啶（DHP）结合位点的影响。结果显示：预防或治疗性给予*m*-Nif（20 mg·kg^{-1}·d^{-1}）12 或 9 周，血压降低，心室重和心肌线粒体钙含量减少，且肥厚心肌DHP结合位点密度显著降低（450±25, 462±36 fmol·mg^{-1} *vs* 836±47 fmol·mg^{-1} protein, $P<0.001$）。提示：*m*-Nif预防和逆转DOCA-salt 高血压大鼠心肌肥厚的作用可能与其减少肥厚心肌DHP结合位点密度和血压降低有关。

关键词： 间硝苯地平 心肌；结合位点；二氢吡啶；去氧皮质酮

EFFECTS OF *M*-NIFEDIPINE ON DIHYDROPYRIDINE BINDING SITES IN HYPERTROPHIED LEFT VENTRICULAR CELL MEMBRANES FROM DEOXYCORTICOSTERONE ACETATE-SALT HYPERTENSIVE RATS

Y Xu and MR Rao

Abstract:

m-Nifedipine(*m*-Nif 20 mg·kg^{-1}·d^{-1} ig) was administered orally to male deoxycorti-costerone-acetate-salt(DOCA) hypertensive rats for 9 or 12 wk, the affinity and density of dihydropyridines (DHP) binding sites in the membranes of left ventricle (LV) were investigated. Treatment with *m*-Nif, whether for prevention (6 wk postoperation) or regression (9 wk postoperation) lowered systolic blood pressure, decreased the weight of left ventricle and the Ca^{2+} concentration in mitochondria in gypertrophied LV. The density (B_{max}) and the total number of DHP binding sites in gypertrophied LV were also markedly decreased (450±25, 462±36 fmol·mg^{-1} *vs* 836±47 fmol·mg^{-1} protein, $P<0.001$). There was no difference between groups in constant (K_D) values of DHP binding sites. These results indicate that *m*-Nif prevented and regressed cardiac mass in DOCA hypertensive rats through mechanisms that may be associated with their density of DHP binding sites and control of blood pressure.

Keywords: Cardiac mass Binding sites Dihydropyridine Deoxycorticosterone acetate *m*-Nifedipine

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