

عنوان مقاله:

Antihypertensive effect of auraptene, a monoterpene coumarin from the genus Citrus, upon chronic administration

محل انتشار:

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خلاصه مقاله:

Objective(s): Auraptene, a monoterpene coumarin from Citrus species, exhibits cardioprotective effects. In this study, the effects of auraptene administration were investigated on blood pressure of normotensive and desoxycorticosterone acetate (DOCA) salt induced hypertensive rats. **Materials and Methods:** Five weeks administration of auraptene (۲, ۴, ۸ and ۱۶ mg/kg/day) and nifedipine (۰.۲۵, ۰.۵, ۱, ۲ and ۴ mg/kg/day) in different groups of normotensive and hypertensive rats (at the end of ۳ weeks treatment by DOCA salt) was carried out and their effects on mean systolic blood pressure (MSBP) and mean heart rate (MHR) were evaluated using tail cuff method. **Results:** Our results indicated that chronic administration of auraptene (۲, ۴, ۸ and ۱۶ mg/kg/day) significantly reduced the MSBP in DOCA salt treated rats in a dose and time dependent manner. The percent of decreases in MSBP levels by the highest dose of auraptene (۱۶ mg/kg) at the end of ۴th to ۸th weeks, were ۷.۰۰%, ۱۰.۷۸%, ۱۶.۰۷%, ۲۱.۲۸% and ۲۷.۵۴% respectively ($P < 0.001$). Moreover the antihypertensive effect of auraptene was less than nifedipine (ED_{50} value of nifedipine = ۰.۷ mg/kg at ۸th week and ED_{50} value of auraptene = ۵.۶۴ mg/kg at ۸ week). **Conclusion:** Auraptene considerably reduced MSBP in hypertensive rats, but not in normotensive (normal saline treated) rats. The results of MHR measurement showed that the increase in MHR was not significant in comparison with DOCA treated rats.

کلمات کلیدی:

blood pressure, Cardiovascular, DOCA salt, Hypertension

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