

犬尿管および冠動脈に及ぼすニフェジピンの効果の比較

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Comparison of the Effects of Nifedipine on Ureter and Coronary Artery Isolated from the Dog

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ABSTRACT The effect of nifedipine (Adalat®) on isolated dog ureter was compared with that of isolated coronary artery. Nifedipine at a concentration of 10^{-8} mol/l significantly decreased the frequency of ureteral rhythmic contractions evoked by potassium, and suppressed the force of these contractions at a concentration of 3×10^{-8} mol/l. In potassium-contracted coronary artery strips, nifedipine at concentrations more than 3×10^{-9} mol/l produced significant relaxations in a concentration-dependent manner. The results indicate that nifedipine is able to act inhibitorily on ureteral contractions, and inhibition of pace making activities in ureteral smooth muscle was suggested as a mode of action of nifedipine.

抄録 摘出犬尿管に及ぼすニフェジピンの効果を冠動脈に及ぼす作用と比較検討した。K⁺で発生する尿管の律動収縮頻度はニフェジピン 10^{-8} M で減弱し、 3×10^{-8} M で収縮抑制を起こした。K⁺で拘縮を起こした冠動脈条片では 3×10^{-9} M 以上のニフェジピンで用量依存的に弛緩を起こした。以上の結果はニフェジピンが尿管の収縮に対して抑制的に働き、かつ尿管平滑筋の律動性にも抑制的に働くことを示した。

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