

Enhancement of blood pressure response to dopamine by Angiotensin II

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The interaction of dopamine and angiotensin II (AH) on blood pressure and heart rate was studied in rats. The influence of reserpine pretreatment and vagotomy was also studied. Inbred rats anesthetized with urethane received intravenous (i.v.) doses of 50, 100, 200, or 400 ng (per 100 g body weight) of dopamine HO, before and after a single i.v. dose of 0.025 µg of AII. The same doses of dopamine were tested in vagotomized rats and in rats pretreated with reserpine. The effect of dopamine alone on blood pressure was biphasic, since 16 of 38 rats showed an early fall followed by a later rise. The early fall decreased significantly with the dose and was absent with the highest dose tested (400 µg). The late rise was observed in all experiments, and it increased significantly with the dose. Parallel to hypotension, a decrease of heart rate was observed, but both phenomena appeared not to be linked by a cause-effect relationship. Vagotomy prevented both hypotension and bradycardia induced by