

Publication

Acute and chronic haemodynamic and natriuretic effects of atriopeptin II in conscious rats

JournalArticle (Originalarbeit in einer wissenschaftlichen Zeitschrift)**ID** 155639**Author(s)** Hofbauer, K G; Criscione, L; Sonnenburg, C; Muir, A; Mah, S C**Author(s) at UniBasel** [Hofbauer, Karl G.](#) ;**Year** 1986**Title** Acute and chronic haemodynamic and natriuretic effects of atriopeptin II in conscious rats**Journal** Journal of Hypertension**Volume** 4**Number** 2**Pages / Article-Number** S41-7**Keywords** Animals; Aorta/drug effects; Atrial Natriuretic Factor/*pharmacology; Blood Pressure/drug effects; Heart Rate/drug effects; Hemodynamics/*drug effects; Male; Natriuresis/*drug effects; Potassium/urine; Rats; Inbred Strains; Renal Circulation/drug effects; Splanchnic Circulation/drug effects; Time Factors

The haemodynamic and natriuretic effects of an atrial natriuretic peptide were studied in conscious rats during acute and chronic administration of the peptide. Infusion of atriopeptin II (0.3 microgram/kg per min intravenously) for 60 min produced a fall in blood pressure and a rise in heart rate, accompanied by a significant decrease in renal and mesenteric blood flow. Despite the renal vasoconstriction, urinary sodium excretion increased markedly. These findings suggest that the hypotensive effect of atriopeptin II in conscious rats is not mediated by systemic vasodilatation, and that renal vasodilatation is not a prerequisite for the natriuretic action of this peptide. During infusion of atriopeptin II (24 micrograms/day) for 2 days, a small but persistent hypotensive effect was observed, which was accompanied by transient tachycardia. However, infusion of the same, or a higher (120 micrograms/day), dose of atriopeptin II for 4 days failed to produce any natriuretic effects. These results suggest that atrial natriuretic peptides are more important in acute than in chronic regulation of sodium excretion.

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