

Gene therapy outlasts losartan potassium in hypertension

In spontaneously hypertensive rats (SHRs), IV losartan potassium lowered BP for several hours, but the BP-lowering effect of gene therapy lasted for at least the 90-day duration of the study, report researchers in the US.

In this study, the researchers injected 5-day-old SHRs with a retroviral construct designed to produce a protein that is antisense to a portion of the angiotensin type I receptor (AT₁R); controls received saline or viral vehicle injections. Another group of SHRs received IV losartan potassium.

AT₁R-antisense expression

Expression of AT₁R-antisense was established within 3 days, but was no longer detectable by 60 days. Despite this, BP in treated SHRs remained significantly below that of controls for 90 days, and was not significantly different from the BP of another strain of normal rats.

The researchers note that this gene therapy did not produce a significant increase in plasma levels of angiotensin II, compared with 34- and 65-fold increases produced by the administration of losartan potassium in the 2 rat strains studied.

Lu D, Raizada MK, Iyer S, Reaves P, Yang H, et al. Losartan versus gene therapy: chronic control of high blood pressure in spontaneously hypertensive rats. *Hypertension* 30: 363-370, Sep 1997

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