

Angiotensin Receptor Blockers and the Kidney: Possible Advantages over ACE Inhibition?

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ABSTRACT

This review deals with similarities and differences between the effects of ACE inhibitors and AT₁-receptor blockers in the kidney. Specific receptor blockade has demonstrated that the beneficial effects of AT₁ blockers arise from two mechanisms: the reduction of the AT₁ receptor mediated response and the increase in plasma levels of Ang II through the AT₁-receptor blockade, which leads to increased stimulation of the AT₂ receptor (the so-called yin-yang effect). Both ACE inhibition and AT₁-receptor blockade provide significant renal protection in the majority of experimental animal models of kidney diseases. AT₁ receptor blockade may offer additional clinical benefits over ACE inhibitor treatment, particularly in the kidney, where AT₁-receptor blockade does not cause the fall in glomerular filtration rate seen with ACE inhibitor treatment. A number of long-term clinical studies currently running should show the real value of this new class of compounds in the management of hypertension and associated cardiorenal diseases.