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DIABETES

Dual RAAS blocker trial stopped prematurely

The renin–angiotensin–aldosterone system (RAAS) regulates blood pressure through both direct and indirect mechanisms. RAAS blockers that act at the level of angiotensin or lower in the cascade can cause compensatory increases in the plasma renin level. To overcome this, investigators in the ALTITUDE study used a strategy of blocking the RAAS at multiple levels, including renin itself. The results were presented at the American Society of Nephrology's Kidney Week 2012.

ALTITUDE researchers randomly assigned 8,561 patients with type 2 diabetes mellitus as well as either chronic kidney disease, cardiovascular disease, or both, to be treated with either aliskiren (a renin blocker) or placebo, alongside an inhibitor of angiotensin-converting enzyme or the angiotensin receptor. Dual RAAS blockade did not reduce the incidence of major cardiovascular or renal events associated with high blood pressure compared with placebo (18.3% vs 17.1%) during follow-up (median 32.9 months). The researchers, therefore, stopped the trial early.

Indeed, aliskiren might even be harmful to these individuals. Patients treated with aliskiren were more likely to be hyperkalaemic or hypotensive than patients who received placebo (11.2% vs 7.2%, and 12.1% vs 8.3%, respectively). Given that previous studies involving aliskiren have shown improvements in surrogate markers for cardiovascular and nephrologic risk, the ALTITUDE trial serves as a reminder that risk–benefit data remain the gold standard for study end points.

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Original article Parving, H.-H. *et al*. Cardiorenal end points in a trial of aliskiren for type 2 diabetes. *N. Engl. J. Med.* doi:10.1056/NEJMoa1208799