Irbesartan Protects Against Overt Nephropathy

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Irbesartan decreases biomarkers of inflammatory activity in patients who have type 2 diabetes with microalbuminuria, reported Dr. Frederik Persson, of the Steno Diabetes Center in Gentofte, Denmark, and his associates.

Further study is needed to determine whether this anti-inflammatory effect translates into fewer cardiovascular events in this high-risk population, the investigators noted.

The Irbesartan in Patients with Type 2 Diabetes and Microalbuminuria (IRMA-2) study showed that daily irbesartan inhibited the angiotensin II type 1 receptor and protected against the development of overt nephropathy over the course of 2 years. It also hindered the progression of some cardiovascular outcomes, including heart failure. However, the mechanism of the drug's action was unclear.

The pathogenesis of nephropathy in diabetes is thought to involve endothelial dysfunction, low-grade inflammation, growth factors such as transforming growth factor (TGF)-β, and advanced glycation end product (AGE) peptides. Any or all of these may have been affected by irbesartan's influence on the renin-angiotensin-aldosterone system in IRMA-2.

Dr. Persson and his associates conducted a post hoc analysis in a subset of 269 of the IRMA-2 subjects to examine the drug's effect on a broad range of these biomarkers, all of which are associated with the progression of both nephropathy and cardiovascular disease.

Compared with placebo, irbesartan significantly decreased levels of the inflammatory biomarkers high-sensitivity C-reactive protein and fibrinogen. The drug also attenuated the time-related increase in another marker of inflammatory activity, interleukin-6, they said (Diabetes 2006;55:3550-5). ■