HYPERTENSION

AT1 AUTOANTIBODIES AND RESPONSE TO THERAPY

Researchers from the People's Republic of China have reported that the angiotensin-receptor blocker (ARB) candesartan is more effective for blood pressure (BP) reduction than the angiotensin-converting-enzyme inhibitor imidapril in patients who tested positive for anti-angiotensin 1 (AT1) receptor autoantibodies. To the investigators' knowledge, their study is the first multicenter, randomized clinical trial to demonstrate variable efficacy of antihypertensive agents in patients with an autoimmune disorder.

Earlier studies have shown a high prevalence of AT1 autoantibodies in patients with hypertension, and that ARBs could inhibit the stimulatory effects of these antibodies on the AT1 receptor.

Wei and colleagues recruited patients with resting BP ≥160/110 mmHg from five treatment centers in the city of Wuhan. All patients were screened for the presence of AT1 antibodies and were randomly assigned to candesartan 8 mg per day or imidapril 5 mg per day for 2 weeks. The target BP was <140/90 mmHg. The use of additional agents was permitted if patients did not achieve this goal.

At enrollment, mean systolic BP was higher among patients who tested positive for AT1 antibodies than those who tested negative. Both drugs were associated with reductions in BP over the 8-week study. In the autoantibody-positive group (n=247), the use of candesartan led to significantly greater reductions in mean BP from baseline than the use of imidapril (systolic: 35.4 mmHg versus 29.4 mmHg, P=0.000; diastolic: 16.9 mmHg versus 14.2 mmHg, P=0.002). However, in patients without AT1 autoantibodies (n=265), no differences in BP reduction were observed between the treatment groups. The investigators conclude that "circulating AT1 autoantibodies is [sic] a useful biomarker for targeted antihypertensive therapy".

Alexandra King

Original article Wei, F. *et al*. Candesartan versus imidapril in hypertension: a randomised study to assess effects of anti-AT1 receptor autoantibodies. *Heart* doi:10.1136/hrt.2009.192104