Low-Dose Chlorthalidone Beats HCTZ for Ambulatory Blood Pressure Control

ABP significantly lower after four and 12 weeks of treatment

Low-dose chlorthalidone reduced ambulatory blood pressure (ABP) in patients with stage-1 hypertension, whereas low-dose hydrochlorothiazide (HCTZ) resulted in masked hypertension, according to a new study published in the February 2016 issue of the *Journal of the American College of Cardiology*.

Anil K. Pareek, MD, and colleagues at Ipca Laboratories in India compared ABP results with chlorthalidone versus HCTZ in a 12-week study. Fifty-four patients with stage-1 hypertension were randomly assigned to receive chlorthalidone (6.25 mg/day; n = 16), HCTZ (12.5 mg/day; n = 18), or controlled-release HCTZ (12.5 mg/day; n = 20). ABP monitoring was conducted at baseline and after four and 12 weeks of treatment.

The researchers found that, compared with baseline, office BP was lower at weeks four and 12 with all three treatments ($P < 0.01$). Chlorthalidone, but not HCTZ, provided significant reductions in systolic and diastolic 24-hour ABP and nighttime BP at weeks four and 12 ($P < 0.01$). Nighttime systolic ABP was significantly lower with chlorthalidone compared with HCTZ at weeks four ($P = 0.015$) and 12 ($P = 0.020$). HCTZ therapy converted sustained hypertension into masked hypertension. The controlled-release HCTZ group showed a significant reduction in 24-hour ABP compared with the HCTZ group ($P < 0.01$).

"Treatment with low-dose chlorthalidone, 6.25 mg daily, significantly reduced mean 24-hour ABP as well as daytime and nighttime BP. Due to its short duration of action, no significant 24-hour ABP reduction was seen with HCTZ, 12.5 mg daily, which merely converted sustained hypertension into masked hypertension," the authors write. "Low-dose chlorthalidone, 6.25 mg, could be used as monotherapy for treatment of essential hypertension, whereas low-dose HCTZ monotherapy is not an appropriate antihypertensive drug."

Several authors are employees of Ipca Laboratories, which supported the study. One author disclosed financial ties to pharmaceutical companies, including Ipca Laboratories.

Sources: *Medical Xpress*; January 28, 2016; and *JACC*; February 2016.