Hard-to-Treat Hypertensives Responded to Simple Regimen

BY SHERRY BOSCHERT
San Francisco Bureau

SAN FRANCISCO — A simple, aggressive hypertension treatment regimen controlled systolic hypertension in 77% of 1,005 hard-to-treat patients after 18 weeks, Elijah Saunders, M.D., said.

The initial treatment consisted of a diuretic alone. If blood pressure control was not achieved, patients were switched to a combination pill containing the same diuretic and an angiotensin II receptor blocker.

The study included at least 100 patients from each of several populations in which high blood pressure often is difficult to control: patients aged 65 years or older, African Americans and Hispanic patients, patients with type 2 diabetes, and patients with metabolic syndrome.

The study, known as the Irbesartan/Hydrochlorothiazide Blood Pressure Reductions in Diverse Patient Populations (INCLUSIVE) trial, is the first large-scale hypertension study to include such a broad range of patient groups, Dr. Saunders said at the annual meeting of the American Society of Hypertension. Women comprised 52% of the cohort.

Some of the study participants had risk factors for cardiovascular disease including obesity, abnormal glucose tolerance, high triglyceride levels, or low HDL cholesterol. A large proportion of hypertensive people have these risk factors, and they often need two or more medications to control hypertension.

Patients entered the trial with high blood pressure that was not controlled adequately with one medication. After a 4-week washout period in which patients received placebo, treatment began with the diuretic hydrochlorothiazide at 12.5 mg/day. After 2 weeks, blood pressures were under control in 27% of patients.

The remaining patients were switched to combination treatment with 12.5 mg of hydrochlorothiazide and 150 mg of the angiotensin II receptor blocker irbesartan in a single daily pill (Avalide) for 8 weeks. During this second phase of treatment, a majority of patients reached blood pressure control: Systolic pressure was under control in 56% of patients, and diastolic was controlled in 72%.

Patients who still had high blood pressures 12 weeks into the study were switched to a double dose of Avalide: 25 mg of hydrochlorothiazide with 300 mg of irbesartan per day.

At the end of the 18-week trial, the study regimen had controlled 77% of systolic blood pressures and 83% of diastolic pressures, said Dr. Saunders, professor of medicine at the University of Maryland, Baltimore. The other principal investigator in the study was Joel Neutel, M.D., of the Orange County Research Center, Tustin, Calif., and the University of California, Irvine.

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No particular efforts were made by the study patients to alter diet or exercise habits, suggesting that the benefits could be attributed to the medications.

Study patients were seen in 119 clinics, showing that high rates of blood pressure control can be achieved in general clinic settings, Dr. Neutel said.

The study was funded by the two companies that distribute Avalide in partnership, Bristol-Myers Squibb Co. and Sanofi-Synthelabo. Dr. Saunders is a consultant to both companies. Dr. Neutel is a speaker for Bristol-Myers Squibb.

The treatment was well tolerated. Dizziness was the most common side effect, occurring in 3% of patients. The incidence of hypokalemia did not increase with the higher thiazide dose.

In the United States, 53% of patients treated for hypertension reach recommended blood pressure goals of less than 140/90 mm Hg for the general population or 130/80 mm Hg for people with diabetes or chronic kidney disease, a 2000 study found. The magnitude of success in the current study surprised investigators, Dr. Saunders said.

Systolic blood pressures in the study dropped an average of 21 mm Hg, from 154 to 133 mm Hg. Diastolic pressures fell 10 mm Hg, from 91 to 81 mm Hg on average. ■

In-Office Detection of White Coat Hypertension Possible

BY SHERRY BOSCHERT
San Francisco Bureau

SAN FRANCISCO — You may not need to send patients with suspected "white coat hypertension" home with an ambulatory blood pressure monitor. Automated repeat measurements in the office work just as well for ruling out this type of hypertension, Giuseppe Crippa, M.D., said at the annual meeting of the American Society of Hypertension.

In a study of 122 patients, measurements from an automated, in-office oscillometric device that obtained 10 valid blood pressure readings matched ambulatory blood pressure measurements closely enough that the in-office readings identified 40 out of 41 patients with white coat hypertension, said Dr. Crippa of Guglielmo da Saliceto Hospital, Piacenza, Italy.

The study included consecutive patients referred to the hospital's hypertension unit to confirm or rule out suspected hypertension. All patients had clinic readings above 140/90 mm Hg, but reported measurements at home that were consistently below 140/90 mm Hg.

For each patient, in-office blood pressures were taken by a physician, a nurse, and the automated device (in random order) and compared with ambulatory blood pressure measurements. The doctor and nurse each took three readings after the patient had rested for 20 minutes.

The automated repeat measurements were taken at 2.5-minute intervals with the patient sitting alone in a clinic room. Investigators compared the average of the last two measurements taken by the doctor and nurse with the average of the last five measurements by the automated device and the mean daytime ambulatory blood pressure.

Blood pressures taken by doctors and nurses were significantly higher than daytime ambulatory measurements. The automated and ambulatory measurements closely overlapped, however, with no significant differences between them, he said.

Doctor's measurements averaged 15/11 mm Hg higher, and nurses' measurements averaged 11/9 mm Hg higher, than daytime ambulatory blood pressures. Only 1 of 41 patients who were normotensive on daytime ambulatory monitoring had hypertension on automated in-office testing.

Automated repeat office blood pressure measurements "could be a substitute for home blood pressure monitoring," he said.

Hypertension was defined as blood pressures above 132/85 mm Hg. Conventional measurements by physicians in the office can be inaccurate because of variable reactions by the patients (white coat hypertension) and errors in technique. This can lead to an overestimate of hypertension, incorrect diagnoses, and inappropriate treatment, Dr. Crippa said.

The study shows that white coat hypertension also occurs when nurses take the measurements, he noted.

Average systolic blood pressure readings in the 41 patients with white coat hypertension were 137 mm Hg by doctors' measurements, 133 mm Hg by nurses, 123 mm Hg by the automated device, and 121 mm Hg on ambulatory daytime monitoring. Ambulatory monitoring took place between 7 a.m. and 5 p.m.

Average diastolic blood pressure readings in patients with white coat hypertension were 86 mm Hg when taken by doctors, 83 mm Hg by nurses, 75 mm Hg by the automated device, and 73 mm Hg by ambulatory monitoring. ■

Nicardipine Seen Safe for Use in High-Blood-Pressure Crises

BY JANE SALODOF MACNEIL
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PHOENIX, ARIZ. — Intravenous nicardipine can reduce blood pressure by 15%-20% without impairing blood supply to the brain in hypertensive emergencies, preliminary results from an ongoing case-control study show.

Results so far suggest nicardipine therapy might even improve cerebral oxygenation ($PbrO_2$) in ischemic patients, reported study investigator Varun Puri, M.D.

"There was no reduction in oxygen delivery to the brain despite significant reduction in [the fraction of inspired oxygen]," he said at a meeting sponsored by the Society of Critical Care Medicine.

Dr. Puri presented data on 17 patients with acute neurological disorders; 11 were women.

The patients' average age was 57 years, and pathologies included seven subarachnoid hemorrhages, four traumatic brain injuries, three intracerebral hemorrhages, two arteriovenous malformations, and one case of anoxia.

The patients had 36 episodes of hypertensive emergency during the study: 11 from acute cardiovascular syndrome, 14 postoperatively, and 11 after trauma. The nicardipine dose, titrated as clinically indicated to lower blood pressure, ranged from 2.5 mg to 15 mg per hour. The length of treatment ranged from 12 hours to 10 days.

Dr. Puri reported that systolic blood pressure fell from 175 mm Hg pretreatment to 143 mm Hg at 8 hours after treatment, diastolic blood pressure decreased from 84 mm Hg to 69 mm Hg, and mean arterial blood pressure dropped from 114 mm Hg to 95 mm Hg. All the changes were statistically significant.

Brain tissue monitoring over an 8-hour period showed no significant changes in intracranial pressure or partial brain tissue oxygenation ($PbtO_2$). Fraction of inspired oxygen (FiO_2) fell from 0.72 to 0.62, a statistically significant difference.

In six patients presenting with cerebral hypoxia, average $PbtO_2$ was 10.4 mm Hg before treatment with nicardipine, a specific arterial dilator. By 4 hours post treatment, oxygenation had increased to 20.4 mm Hg. At 8 hours, it was 22.2 mm Hg, a statistically significant change.

One severe adverse event was reported: a case of hypotension that responded quickly to a reduction in the nicardipine dose, Dr. Puri said. Five patients eventually required oral antihypertensive agents, and three went on to β-blockers, he said. None had been on β-blockers before the trial, and patients taking two or more agents for hypertension had also been excluded.

The investigators are continuing to enroll patients, said Dr. Puri, of Creighton University Medical Center in Omaha, Neb. Integra LifeSciences Corp., maker of the Licox brain tissue oxygen monitoring system, provided funding for the study. ■