Prompts Improved Rx Compliance, Not BP Control

BY MITCHEL L. ZOLER
Philadelphia Bureau

TORONTO — Computerized reminders that were flashed to primary care physicians as they checked and recorded their patients' blood pressures led to a small but significant improvement in the rate of prescribing drugs that followed hypertension-management guidelines.

But in this study, which randomized 14 general medicine clinics to either use or no use of the computer-generated reminders, automated prompts had no effect on the rate at which patients had their BP controlled to target levels, according to Dr. LeRoi S. Hicks, an internal medicine physician at Brigham and Women's Hospital and Harvard Medical School, both in Boston.

It's possible that improved BP control could be achieved by not only prompting physicians to use the right drugs, but also prompting them to use the right dosage or to add more drugs when needed, Dr. Hicks said at the 14th World Congress on Heart Disease.

The study involved eight community-based and six hospital-based general medical clinics in the Boston area during July 2003-February 2005. The physicians at seven of the clinics were randomized to treat patients for hypertension by their usual practice. In the other seven clinics, when physicians measured their patients' BPs and then entered the readings in each patient's computerized record, they received a computer-generated reminder telling them which drugs to preferentially use to control BP. The study included 786 patients treated using the computer-generated messages, and 1,048 patients treated by usual care.

Automated prompts had no effect on the rate at which patients had their BP controlled to target levels.

DR. HICKS

The drug recommendations were based on the sixth report of the Joint National Commission on the Prevention, Detection, Evaluation, and Treatment of High Blood Pressure (JNC 6), the prevailing guideline when the study began.

The two patient groups were similar by age, ethnic and racial profile, insurance coverage, and baseline level of BP control. About 43% of patients in each group were at their goal BP when the study began. Nearly 90% were on JNC 6–compliant regimens at baseline. During an average follow-up of about 1.5 years, the computer-generated prompts had essentially no effect on the extent of BP control. Target pressures were reached by 45% of patients in the usual care group and by 48% in the intervention group, a nonsignificant difference, reported Dr. Hicks at the congress, sponsored by the International Academy of Cardiology.

But the computerized decision support system led to a small but significant rise in prescribing compliance with the JNC 6 guidelines when this was assessed 7 days after each patient's medical visit. The computerized prompts were linked with a 32% increased rate of compliance, compared with the control patients, after adjustment for baseline differences in demographic and clinical parameters. But because most patients (nearly 90%) were in compliance at baseline, the absolute amount of increased compliance achieved by the intervention was modest, Dr. Hicks said. ■

Novel Analgesic Shows No Hypertensive Effects

BY BRUCE JANCIN
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PARIS — Naproxcinod, an investigational pain reliever being developed for osteoarthritis, resulted in significantly lower blood pressure than did naproxen in a pivotal phase III clinical trial.

This finding holds the key to the drug's seemingly bright future. Conventional NSAIDs such as naproxen, as well as selective cyclooxygenase (COX)-2 inhibitors, are known to affect blood pressure adversely and can counteract the benefits of antihypertensive agents. This hypertensive action is thought to be an important mechanism in the increased cardiovascular risk that has led to across-the-board black box warnings for NSAIDs, study investigator Dr. Brigitte Duquesroix noted at the annual European Congress of Rheumatology.

Naproxcinod is the first in a new class of anti-inflammatory analgesics known as COX-inhibiting nitric oxide donators, said Dr. Duquesroix, director of clinical research at NicOx S.A., in Sophia Antipolis, France.

Naproxcinod has two mechanisms of action: inhibition of both COX-1 and -2 via metabolism to naproxen, plus sustained release of nitric oxide.

Nitric oxide is known to have multiple beneficial cardiovascular effects, including maintenance of vascular endothelial function, antiplatelet activity, and modulation of smooth muscle cell proliferation. It also may have a protective effect in the GI tract.

Dr. Duquesroix reported on 918 patients with knee osteoarthritis seen at 110 U.S. sites. The patients were randomized in a double-blind fashion to 13 weeks of naproxcinod at 375 or 750 mg b.i.d., naproxen 500 mg b.i.d., or placebo. Half of the participants were hypertensive at baseline. Office blood pressure readings were obtained in standardized fashion 2-4 hours after the morning dose.

Over the full 13 weeks, both doses of naproxcinod resulted in lower systolic and diastolic blood pressures, compared with baseline readings and compared with naproxen. At week 13, the naproxcinod 750-mg b.i.d. group had a mean 2.9-mm Hg lower systolic and 1.8-mm Hg lower diastolic blood pressure than did the naproxen 500-mg b.i.d. group. Patients on naproxcinod at 375 mg b.i.d. averaged a 1.8-mm Hg lower systolic and 1.6-mm Hg lower diastolic blood pressure than did naproxen-treated patients.

Analgesic efficacy of naproxcinod at both doses was superior to placebo and was comparable to naproxen based on Western Ontario and McMaster Universities Osteoarthritis Index pain and function scores as well as Patient's Global Assessment of disease status.

GI adverse events were noted in 17% of patients on the 750-mg b.i.d. dose, 13% on the lower dose of naproxcinod, 24% of those on the naproxen 500-mg b.i.d. dose, and 12% on placebo.

Two additional confirmatory pivotal phase III trials are ongoing. One year long clinical trial involves more than 1,000 knee osteoarthritis patients. The other, a 13-week study, features 800 patients with osteoarthritis of the hip. NicOx plans to file for U.S. marketing approval for naproxcinod by mid-2009, Dr. Duquesroix said in an interview. ■

Repeated Office Measurements Can Reveal 'Masked Hypertension'

BY CAROLINE HELWICK
Contributing Writer

NEW ORLEANS — "Masked hypertension," thought to affect about one in eight persons, can be identified through repeated office blood pressure measurements in those who show discrepancy between office and home blood pressure levels, according to Italian investigators.

"We were able to diagnose masked hypertension by using repeated office measurements. It matches what our patients found in home monitoring," said principal investigator Dr. Giuseppe Crippa of Guglielmo da Saliceto Hospital, Piacenza, Italy.

Masked hypertension is defined as normal office BP but high ambulatory or home BP. The condition is thought to be as prevalent as white-coat hypertension and is often missed in clinical practice, said Dr. Crippa at the annual meeting of the American Society of Hypertension.

His study compared the level of agreement between office blood pressure (OBP), repeated office blood pressure (ROBP), and daytime ambulatory blood pressure (ABP) in 48 pharmacologically untreated patients with normal OBP (less than 140/90 mm Hg) but elevated daytime ABP (at least 135/85 mm Hg).

Since ABP averages multiple measurements, it is the accepted standard for diagnosing masked hypertension. For follow-up, home BP measurement is regarded as a simpler, reliable, and cost-effective alternative, he said.

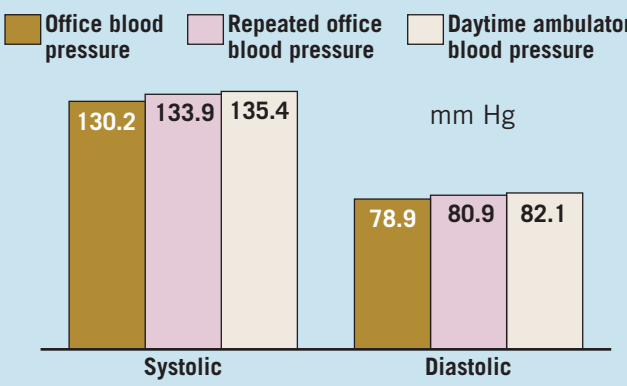
OBP values were derived from the average of at least three sphygmomanometric measurements obtained during at least three separate visits, over a 3-week period. ABP values were calculated as the average of daytime readings taken every 15 minutes and nighttime readings obtained every 30 minutes. ROBP was performed after 20 minutes of rest with the patient seated comfortably alone; 10 consecutive measurements were taken every 2.5 minutes, with the average of the final six readings considered the final value.

The average blood pressure varies highly over 20 consecutive measurements, Dr. Crippa noted. For example, in one patient, the initial reading taken at 8:02 a.m. was 210/121 mm Hg and pulse rate was 96 bpm; midway through the ROBP it dropped to 140/79 mm Hg and 80 bpm; and concluded at 137/77 mm Hg and 72 bpm.

In the study, the OBP readings (both systolic and diastolic) were slightly but significantly lower than those achieved with ABP or ROBP. The differences between OBP and both ABP and ROBP were statistically significant. The ABP and ROBP readings were not significantly different and, in fact, were highly correlated with each other, Dr. Crippa reported.

With ABP as a reference for the diagnosis of masked hypertension, ROBP failed to identify this condition in just 2 out of the 48 patients. ■

Comparison of Office, Ambulatory, and Repeated Office Blood Pressures



Note: Based on data for 48 pharmacologically untreated patients with normal office blood pressure and elevated daytime ambulatory BP.
Source: Dr. Crippa

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