

Acute Severe Hypertension Often Poorly Managed

BY BRUCE JANCIN
Denver Bureau

MUNICH — Acute severe hypertension is a common, suboptimally treated condition with a high recurrence rate and surprisingly high morbidity and mortality.

These are the principal lessons of the just-completed large national Studying the Treatment of Acute Hypertension (STAT) registry, Dr. Christopher B. Granger said at the annual congress of the European Society of Cardiology.

The STAT observational registry documented 90-day mortality and readmission rates following an episode of acute severe hypertension (ASH), rates comparable with those typically encountered in patients with acute heart failure or an acute coronary syndrome.

These and other sobering STAT findings “reinforce the major need to improve prevention and treatment of this understud-



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DR. GRANGER

ied condition,” stressed Dr. Granger, a cardiologist at Duke University, Durham, N.C., and chairman of the STAT steering committee.

ASH involving blood pressures in excess of 180/110 mm Hg, or greater than 140/90 mm Hg with subarachnoid hemorrhage, occurs in 1%-2% of the 72 million Americans with chronic hypertension. At some busy urban emergency departments, ASH accounts for up to 25% of all patients seen. Yet little contemporary information is available about the characteristics of affected patients, their treatment, or outcomes. This was the impetus for STAT.

Dr. Granger reported on 1,588 adults who received intravenous antihypertensive agents for ASH within 24 hours of presenting at 25 nationally representative participating U.S. hospitals.

The mean age of STAT registry participants was 58 years. About one-half were women, and 56% were African American. Overall, 89% of participants had a history of chronic hypertension, 35% were diabetic, 31% had chronic kidney disease, 15% had a history of drug abuse, and 27% had previously been hospitalized for ASH. Nonadherence to medications for chronic hypertension was deemed a contributing factor in 25% of ASH episodes.

Roughly one-quarter of patients were admitted for acute hypertension, another quarter for stroke or other neurologic complications, and one-quarter for heart failure or other cardiovascular conditions.

The median hospital length of stay was 5 days. Roughly half of patients were admitted to the intensive care unit. During their stay, 48% of patients had brain imaging by CT or MRI and 45% had an echocardiographic examination—yet dis-

turbingly, a mere 13% had a documented funduscopic exam, Dr. Granger noted.

Among the key STAT findings were:

► **Poor outcomes.** In-hospital mortality was 6.9% and 90-day mortality was 11%. The 90-day readmission rate was 37%, and 9.3% of patients were rehospitalized within 90 days for recurrent ASH.

► **Lengthy time to blood pressure control.** The median time to drive systolic blood pressure below 160 mm Hg was 4 hours. Moreover, following initial control,

fully 60% of patients experienced a rebound to greater than 180 mm Hg. Also, 4% of patients had iatrogenic hypotension, in most cases requiring vasopressors.

► **Variable treatment approaches.** Intravenous antihypertensive therapy was administered within 1 hour in 47% of patients and within 3 hours in 74%. Two-thirds of patients required two or three intravenous antihypertensive drugs. The first intravenous drug employed was labetalol in 32% of cases and metoprolol

in 17%, followed in descending order by nitroglycerin, hydralazine, nicardipine, and sodium nitroprusside. Nicardipine was the only drug that served as monotherapy in the majority of treated patients.

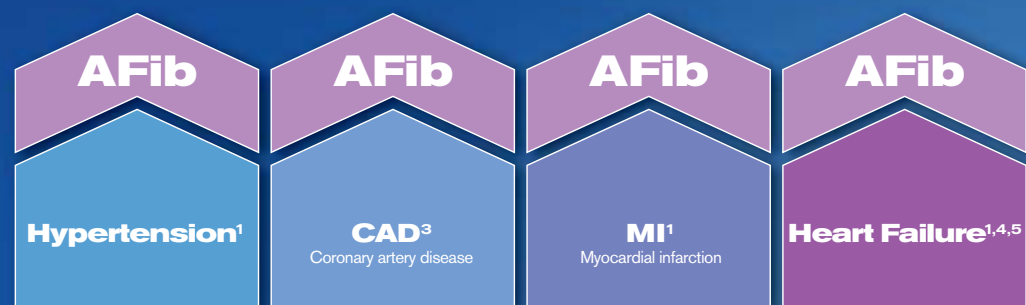
► **Inadequate follow-up.** ASH is a life-threatening condition, yet 65% of patients had no documentation in the medical record of a follow-up appointment being scheduled or attended.

Ongoing STAT analyses include efforts to identify risk factors for recurrence, as

A complex combination

Atrial fibrillation may add complexity and risk across a range of cardiovascular diseases

AFib adds significant complexity and risk to a range of cardiovascular diseases¹⁻⁶



There is a negative interaction between atrial fibrillation and cardiac conditions such as ischemic heart disease and structural heart disease. Mechanisms of hemodynamic instability contribute to burden on the heart as well as burden on the patient.

Atrial fibrillation is associated with increased morbidity and mortality:

- Heart failure¹
- Left ventricular systolic dysfunction⁶
- Post-MI¹

Atrial fibrillation can also have a powerful impact on quality of life (QoL). In the short-term, symptoms such as palpitations, impaired exercise tolerance, and fatigue can impact QoL and activities of daily living.^{7,8} In the longer-term, patients with symptomatic atrial fibrillation show impairment similar to that following heart failure, angioplasty, and MI.⁹ For many patients with atrial fibrillation, maintaining sinus rhythm is the primary goal of therapy.⁷

well as the most effective ways to lower high blood pressures without exacerbating damage to the kidneys and other organs.

“We’re trying to analyze the relationship between patterns of control and outcome. There are interesting data from the ECLIPSE [Evaluation of Clevidipine in the Postoperative Treatment of Hypertension Assessing Safety Events] trial showing that patients with perioperative hypertension who get into

and stay within a target blood pressure range have better outcomes; it was an independent predictor. Whether that’s the case in this population with acute severe hypertension is a very important question we currently lack information on,” he continued.

Both the STAT registry and ECLIPSE were funded by the Medicines Company. Dr. Granger has received research grants from and served as a paid consultant to the company. ■

Early, Aggressive Treatment of Hypertension in Diabetes Urged

BY SHARON
WORCESTER
Southeast Bureau

NEW YORK — Patient-centered management and early, aggressive treatment of hypertension is necessary in patients with diabetes to address the sevenfold mortality increase in

this patient population, according to an updated guidance from the American Society of Hypertension.

Physicians need to take a more integrated, individualized approach to treating hypertension in patients with diabetes by “treating the intricacies of each patient

profile, rather than focusing on the disease in isolation,” according to a statement by ASH.

The new recommendations were addressed in a press briefing and published in a position paper in the *Journal of Clinical Hypertension* (2008;10:707).

The guidance does not alter the fundamental treatment of blood pressure goals for this patient population, but it does emphasize that early detection of risk factors unique to each patient is needed and that earlier, more-aggressive treatment should be implemented, including the identification and reduction of proteinuria.

Once high blood pressure is identified, initiation of ACE inhibitors or angiotensin receptor blocker therapy along with either thiazide-like diuretics or calcium antagonists is needed to maintain a target blood pressure of 130/80 mm Hg. More frequent patient follow-up also is needed, according to the guidance.

Previous studies show that, compared with conventional treatment, aggressive blood pressure control is associated with far fewer cardiovascular events in diabetic patients, Dr. George Bakris, professor of medicine at the University of Chicago, said during the briefing. Yet physicians are not being as aggressive as necessary to get blood pressure under control. Physicians also need to empower patients to take control, and they need to focus on the goal of reducing morbidity.

Physicians need to emphasize that the need for treatment is not transient but is lifelong. That said, obese patients who lose weight can successfully reduce their antihypertensive pill burden, he noted.

“These patients require an integrated therapeutic intervention that, in addition to blood pressure control, should include glycemic and lipid control and antiplatelet therapy,” Dr. Bakris noted in an ASH statement. It is imperative that all risk factors be attacked simultaneously to manage the profile of each patient more vigilantly, he added.

The challenges of identifying and treating hypertension are not limited to adults.

Nearly a third of obese teens also have high blood pressure, Dr. Bonita Falkner, a nephrologist at Thomas Jefferson University, Philadelphia, said during the briefing.

Overall, about 3.5% of children have hypertension and another 3.5% have prehypertension. It is likely that these children have—or will develop—blood pressure levels that require therapy and that they will become hypertensive young adults, said Dr. Falkner.

Additional clinical research involving adolescents is needed to define the disease pathway and to improve detection and treatment methods, she said. But for now, she recommended that blood pressure be measured as part of routine health care beginning at age 3 years, and in those younger than 3 years with chronic disease or unexplained symptoms, and that an appropriate evaluation be conducted in those with detected and verified hypertension. ■

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Early intervention to maintain sinus rhythm enhances patient care⁷

To address the complex challenges presented by atrial fibrillation, early and aggressive intervention to restore and maintain sinus rhythm is essential not only to control disease progression⁷ and the consequences of that progression, but to reduce potential acceleration of cardiovascular comorbidities.^{1,3,4}

Understanding AFib. Heart by heart. Patient by patient.

To learn more about atrial fibrillation, visit AFMD.net.

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