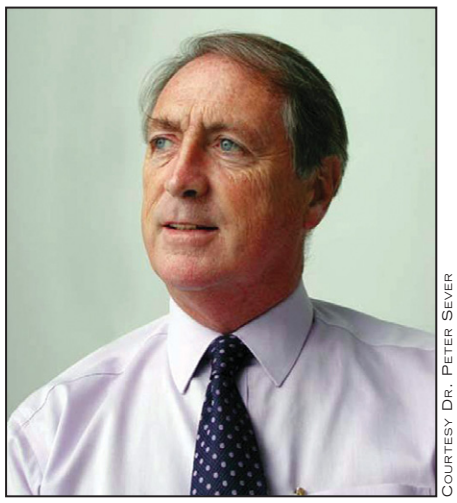
Fourfold Greater Risk of Stroke

BP Variability *from page 1*

The new analysis focused on the relationship between blood pressure variability over time and risk of the study end points. When the investigators compared patients in the highest 10% for between-visit variability in systolic or diastolic blood pressure to those in the lowest 10%, they found that those in the top decile had a fourfold greater risk of stroke and a threefold greater risk of cardiovascular events.



COURTESY DR. PETER SEVER

'Variability is a surrogate for vascular stiffness,' Dr. Peter Sever said.

Moreover, Dr. Sever and coworkers showed that the calcium channel blocker–treated group had significantly less blood pressure variability over time than did those treated with atenolol. This finding provides a plausible mechanistic explanation for the previously reported superior clinical outcomes with the calcium channel blocker.

Patients on the amlodipine-based regimen had a mean visit-to-visit variability in systolic blood pressure of 10.9 mm Hg, compared with 13.4 mm Hg in those on the atenolol-based regimen. Only 9.1% of patients on the amlodipine-based regimen had a systolic blood pressure reading of 180 mm Hg or more at any time during follow-up, compared with 19.2% of those on atenolol-based therapy.

Blood pressure was measured three times at each office visit. In addition, more than 1,900 ASCOT participants underwent annual 24-hour ambulatory blood pressure monitoring. While greater within-visit and 24-hour blood pressure variability were statistically associated with increased rates of stroke and coronary events, they were much less robust predictors than visit-to-visit blood pressure variability, according to Dr. Sever.

Several recent large meta-analyses indicate that while calcium channel blockers and diuretics reduce blood pressure variability, beta-blockers, angiotensin receptor blockers, and ACE inhibitors actually increase it, he continued.

Within the ASCOT population, older age, diabetes, known vascular disease, and smoking were associated with greater between-visit blood pressure variability.

"We believe variability is a surrogate for vascular stiffness, and probably for the aging-related impairment in the baroreceptor reflex, a hypothesis we'll look at more closely in the near future," Dr. Sever said.

Discussant Dr. Carlo Di Mario of Royal Brompton Hospital, London, proposed what he called "a more mundane theory" to explain the better outcomes in the amlodipine-treated group: Isn't it likely that a calcium channel blocker–based antihypertensive regimen would be better tolerated than a more fatiguing beta-blocker–based therapy, with resultant better treatment compliance?

Dr. Sever replied that ASCOT included pill counts as a compliance measure, which showed similar results for the two study arms.

In an interview, he said that the regular occurrence of more than about a 10– to 15–mm Hg difference in systolic blood pressure from office visit to visit is a practical indicator of excessive variability. It's something physicians have traditionally shrugged off as random variation and clinically unimportant. The new ASCOT findings indicate otherwise.

"If those patients aren't on a calcium channel blocker, you should be thinking about switching them to a calcium channel blocker," the physician advised.

The ASCOT study was funded by Pfizer and Servier. Dr. Sever disclosed having served on the speakers bureau for Pfizer. ■

MY TAKE

Ambulatory Monitoring Reinforced

The post hoc analysis by Dr. Sever and his colleagues of ASCOT demonstrates that blood pressure variability is a stronger predictor of stroke and coronary events compared with mean BP. This is an important observation.

One must consider this new information alongside the results of a recent review by Dr. Peter M. Rothwell of John Radcliffe Hospital, Oxford, England (Lancet 2010;375:938-48). This review, which strongly supports the findings reported by Dr. Sever, emphasizes the importance of BP variability as a predictor of stroke risk. Moreover, studies have shown that only dihydropyridine calcium channel blockers and thiazide diuretics minimize BP variability, and this may account for their benefits in terms of stroke reduction. This information strongly suggests that BP variability is an important predictor of stroke.

These observations should draw attention to lifestyle factors that can affect BP variability, including high salt intake, excessive periods of stress, excessive alcohol consumption, and untreated sleep apnea.

The authors are to be praised for this type of analysis. It reinforces the important use of ambulatory BP monitoring to help detect variability in everyday BP in individuals who have labile office pressures.

GEORGE BAKRIS, M.D., *professor of medicine at the University of Chicago, was a member of the Seventh Report of the Joint National Committee on the Prevention, Detection, Evaluation, and Treatment of High Blood Pressure (JNC 7) writing committee. He reported financial relationships with Abbott, GlaxoSmithKline, Novartis, Merck, Gilead, and other companies.*

Psoriasis Elevates Patients' Risk for Cardiovascular Events

BY MITCHEL L. ZOLER

ATLANTA — Patients with psoriasis had a significantly increased risk for developing atrial fibrillation or need for coronary artery revascularization in a review of the entire Danish population during 1997-2006.

The report is the first to find a link between psoriasis and these two types of cardiovascular disease events, Dr. Ole Ahlehoff reported in two posters at the annual meeting of the American College of Cardiology.

The analysis also showed that patients with psoriasis had a significantly increased risk for ischemic stroke and, in those with severe psoriasis, for all-cause death.

The link between psoriasis and these events occurs "presumably because of inflammation" mediated by T helper cells, said Dr. Ahlehoff of the cardiology department at Copenhagen University Hospital Gentofte.

"We need to consider psoriasis patients as a group at increased risk" for cardiovascular disease events, he said in an interview. "The vast majority of patients with psoriasis probably meet criteria for [needing] weight loss and increased activity." At the least, patients with psoriasis should reach blood pressure and lipid levels that meet goals for the general population, he said.

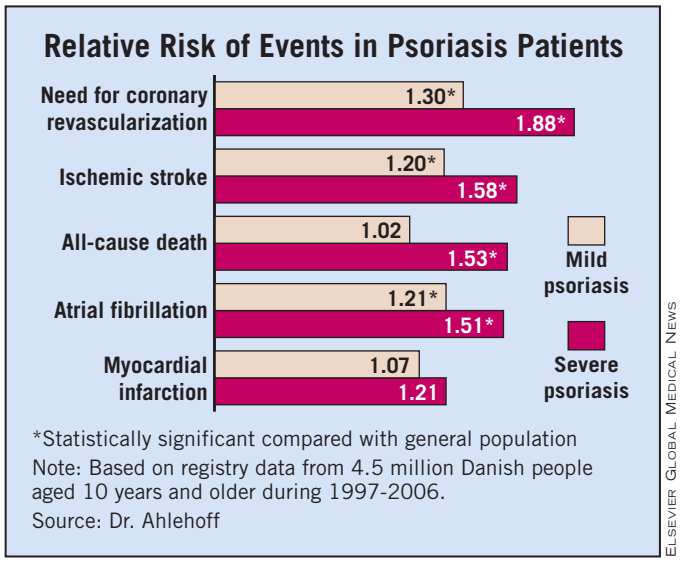
His study reviewed national registry records in Denmark during 1997-2006, which included roughly 4.5 million people aged 10 years or older. During the 10-year span, about 40,000 developed new-onset psoriasis, based on their filling at least two prescriptions for vitamin D, an agent used exclusively to treat psoriasis in Denmark. Dr. Ahlehoff estimated that about 80%-90% of the patients in this group had plaque psoriasis, with most of the rest having psoriatic arthritis. Among these 40,000, the researchers identified about 3,000 as having severe psoriasis, defined as patients hospitalized at least three times for psoriasis during the study period.

The analysis examined the incidence rate of all-cause death and several cardiovascular disease events during the study period in both the psoriasis patients and the rest of the Danish population, with an average follow-up of 5 years.

In an analysis that adjusted for a variety of clinical and demographic variables, including age, gender, calendar year, medications, comorbidities, and socioeconomic status, patients with severe psoriasis had a statistically significant 53% increased risk of all-cause death compared with the general population (see chart). Patients with severe psoriasis also had a statistically significant 88% increased risk for needing coronary artery revascularization, a significant 51% increased risk for developing atrial fibrillation, and a significant 58% increased risk for having an ischemic stroke. The increased stroke risk remained at that level when the analysis excluded patients with atrial fibrillation.

Patients with mild psoriasis also had significantly increased rates of coronary revascularization, atrial fibrillation, and ischemic stroke, although the magnitudes of the increased rates were not as high as in the severe patients.

The analysis also showed that the increased risk linked with psoriasis was magnified in patients who were younger than 50 at the time the study began. Younger adults with severe psoriasis had a twofold greater risk of atrial fibrillation, ischemic stroke, or need for coronary revascularization, compared with the general adult population. ■



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