Blood Pressure Measurement Urged at Earlier Ages

BY CAROLYN SACHS
Contributing Writer

MAUI, HAWAII — Taking blood pressure measurements as part of routine checkups for very young children can help reveal underlying problems early, said Dr. Carl M. Grushkin, head of the division of nephrology at Childrens Hospital Los Angeles.

New data showing a disturbing upturn in high blood pressure rates among children aged 8-17 years shore up efforts to diagnose the problem earlier. After decades of a downward trend from 1963 to 1988, prevalence rates of pre–high blood pressure and high blood pressure increased 2.3% and 1%, respectively, between 1988 and 1999, according to surveys conducted by the National Center for Health Statistics (Circulation 2007;116:1392-400).

Yet, "the [American Academy of Pediatrics], in its recommendations, still says that you don't have to take blood pressures in kids until they're 3," Dr. Grushkin said, speaking at a meeting sponsored by the University Childrens Medical Group and the American Academy of Pediatrics. "I think that's absolutely insane."

"In kids up to 10 years of age who have severe hypertension, essentially you will always find a cause," and "almost always it's something that can be fixed," Dr. Grushkin observed at the meeting, also sponsored by the California Chapter 2 of the AAP. He categorized severe hypertension as being "frequently symptomatic, with systolic, or especially diastolic, blood pressure 15-20 mm Hg greater than 95th percentile for age and height."

To highlight the usefulness of blood pressure measurement in the very young, Dr. Grushkin referred to a case in which a girl had a systolic blood pressure of 90 mm Hg by palpation at her routine checkup at age 1 year and a blood pressure measurement of 140/100 mm Hg at her checkup at age 2.

The little girl's history was negative, she was not on medication, and her height and weight were at the 50th percentile at both her 1- and 2-year checkups. "The femoral pulses were fine," Dr. Grushkin recalled, "and the rest of the physical exam was normal," as were the results of a series of laboratory tests.

'It takes about 30 seconds to [measure a child's blood pressure], and it's reproducible.'

DR. GRUSHKIN

Having been able to rule out most possible underlying causes of the child's hypertension, Dr. Grushkin narrowed his focus to the girl's kidneys. He knew that at least one kidney had to be functioning normally, since there was no renal insufficiency, but was concerned about a possible congenital abnormality or a renovascular problem.

Following a normal ultrasound upon admission to the hospital, the child was started on medication to control the blood pressure; 36 hours later she had a renal angiogram, which showed that while the main renal arteries were normal, the upper polar vessel to one of the kidneys was stenotic.

Deciding that the child was a little small to be a candidate for an operation, and that it was not possible to put in a stent, Dr. Grushkin and the primary care physician kept the child on therapy for 3 years, after which time they brought her back to the hospital and corrected the stenosis. "She came out of surgery and didn't need any more antihypertensives," he said. "She was in the hospital 4 days, went home, and has been fine ever since."

Dr. Grushkin said although many physicians do measure blood pressure in older children routinely, the very young are often overlooked.

Noting concerns among physicians about how to take blood-pressure measurements in very young patients, he offered recommendations from his own practice.

The "old standard way" of measuring blood pressure with a sphygmomanometer has, over the years, moved more and more toward involving automated inflating devices, he observed. "Those work fairly well for kids probably 4 and above, as long as with the little kids you tell them what to expect: that it's going to make a noise, that it's going to squeeze the arm, and it may hurt just a tiny bit," said Dr. Grushkin, also professor of clinical pediatrics at the University of Southern California, Los Angeles.

"They don't work particularly well for very young infants, for the same reason. There's a noise, the cuff is pumped up well above the systolic blood pressure, it's pumped up very quickly, and it hurts."

With babies in his clinic, he said, he always does a palpable systolic blood pressure. "We simply let the mother or the dad hold the baby, put the appropriate size cuff on the baby—usually on the right arm—and put a pacifier in the baby's mouth.''

Then put a finger on the brachial artery, and slowly pump the cuff up. "Where the pulse disappears is the systolic blood pressure. You then release the pressure, and let it come down. You feel it again, and you're done," Dr. Grushkin said. "It takes about 30 seconds to do, and it's reproducible." ■

Coalition Issues Wake-Up Call To Identify, Treat Hypertension

BY HEIDI SPLETE
Senior Writer

WASHINGTON — High blood pressure remains a real and growing problem that, if left untreated, could increase in prevalence by 60% over the next 2 decades, Dr. Richard Roberts said at a press briefing.

"If action is not taken soon … there will be significant public health consequences," said Dr. Roberts, a family physician and professor in the department of family medicine at the University of Wisconsin, Madison.

He spoke on behalf of a coalition of 14 medical groups and voluntary health organizations that commissioned a report to compile the latest information about high blood pressure and its impact on health care systems. The report, "High Blood Pressure and Health Policy: Where We Are and Where We Need to Go Next," serves as a call to action for health policy makers and physicians.

Citing data from the National Health and Nutrition Examination Survey (NHANES), the report notes that the prevalence of high blood pressure in adults in the United States increased from 25% in 1988-1994 to 29% in 1999-2002. In addition, the growing problem of high blood pressure in children is expected to contribute to the overall increase in prevalence over the next 20 years.

The report, which was sponsored by an unrestricted educational grant from Novartis AG, calls for an international effort to address five public policy goals:

- ▶ Recognize that high blood pressure is a global health priority.
- ▶ Achieve global consensus on standards for managing high blood pressure.
- ▶ Empower primary care physicians to be the first lines of defense against high blood pressure on a global level.
- ▶ Educate patients about treatment options and acknowledge the difficulties of adhering to lifestyle and medication regimens.
- ▶ Conduct long-term clinical and epidemiologic studies on the costs and benefits of treating high blood pressure based on emerging trends and scientific research.

Losing weight and becoming more active are among the best ways to prevent hypertension, especially for young people. But for many, regular medication may be necessary to keep their blood pressure at a healthy level, said Dr. Michael A. Weber, chair of the American Society of Hypertension's Specialist Program and one of the coauthors of the report, at the briefing. Patients also need to understand that the only way to know if they have high blood pressure is to have it measured, he said. "It is a totally asymptomatic condition."

Treating high blood pressure could reduce the probability of heart attacks by 40%-50%, the incidence of stroke, and the number of patients requiring kidney dialysis, added Dr. Weber, professor of medicine at the State University of New York, Brooklyn. He is a consultant for several pharmaceutical companies, including Novartis. ■

Antioxidants Do Not Protect Women Against Heart Risks

BY DOUG BRUNK
San Diego Bureau

A large, long-term study has found there is no overall preventive effect of ascorbic acid, vitamin E, or beta-carotene on cardiovascular events in women at high risk for cardiovascular disease, whether taken alone or in combination.

For the randomized trial, known as the Women's Antioxidant and Cardiovascular Study, Nancy R. Cook, Sc.D., of the division of preventive medicine at Brigham and Women's Hospital, Boston, and her associates tested the effects of ascorbic acid, vitamin E, and beta-carotene on the combined primary outcome of myocardial infarction, stroke, coronary revascularization, or CVD-related death in 8,171 women aged 40 years or older. All had a history of CVD or three or more risk factors for CVD.

The mean age of the 8,171 women was 61 years. Of these, 5,238 had a prior cardiovascular event and 2,933 had three or more CVD risk factors. In a two-by-two-by-two factorial study design, each study participant took 500 mg per day of ascorbic acid (synthetic vitamin C), 600 IU of vitamin E every other day, and 50 mg of beta-carotene every other day. The women took the supplements for a mean of 9.4 years, starting in 1995-1996 and ending on Jan. 31, 2005 (Arch. Intern. Med. 2007;167:1610-8).

Compliance was defined as taking at least two-thirds of the study pills. The researchers relied on patient self-reports for compliance twice during the first year, then annually until the end of the trial.

During a mean 9.4 years of follow-up, 1,450 women had a total of 1,856 CVD events. These included 274 myocardial infarctions, 298 strokes, 889 coronary revascularization procedures, and 395 CVD-related deaths. The researchers found no overall effect of ascorbic acid, vitamin E, or beta-carotene on the combined primary outcome of myocardial infarction, stroke, coronary revascularization, or CVD-related death among the women. However, a marginally significant reduction in the primary outcome from vitamin E use was observed in a subgroup of women with a history of CVD (relative risk 0.89).

There were no overall effects of the agents on the individual secondary outcomes of myocardial infarction, stroke, coronary revascularization, or CVD-related death. However, a significant reduction in stroke was seen in women taking both ascorbic acid and vitamin E.

The study was supported by a National Heart, Lung, and Blood Institute grant. Cognis supplied the vitamin E and placebo; BASF supplied all other supplements and placebos. Neither had influence on the study design or conduct. ■