

## Postpartum BP Management Is Tricky

BY MIRIAM E. TUCKER  
Senior Writer

VIENNA — Guidelines are sorely needed for postpartum blood pressure management in women who experience hypertension during pregnancy, speakers said at the 14th World Congress of the International Society for the Study of Hypertension in Pregnancy.

"It's a problem we have very little guidance on and very little information about," said Jason Waugh, a senior lecturer in the Reproductive Science Section at the University of Leicester, England. He presented one of three studies highlighting the knowledge gaps regarding postpartum diagnosis and treatment of women with pregnancies complicated by hypertension.

Determining whether a woman has underlying chronic hypertension can be difficult. Professional societies such as the American College of Obstetricians and Gynecologists define chronic hypertension in pregnancy as that occurring prior to pregnancy or diagnosed before 20 weeks' gestation.

But a study of 501 women with hypertension at delivery suggests that the 20-week cutoff is not a reliable one. Instead, thorough postnatal follow-up is essential for accurate diagnosis, Mr. Waugh said.

The women were given preliminary diagnoses at the time of delivery. They subsequently performed home blood pressure monitoring—during which they followed a strict protocol for medication dosage reduction—for 1-8 weeks and were given final diagnoses. Those with persistent hypertension were referred to cardiovascular physicians for follow-up of more than 1 year, during which none of the final diagnoses changed.

The final diagnoses were preeclampsia in 36% (178 women), gestational hypertension in 42% (210), new diagnosis of chronic hypertension in 10% (51), and preexisting hypertension in 12% (49 with essential hypertension and 13 with renal disease).

Standard risk factors were poor predictors of underlying hypertension during pregnancy: Among the 51 women with chronic hypertension not diagnosed prior to pregnancy, only parity

and gestation diagnosis were predictive of the final diagnosis, with smoking also showing a strong but nonsignificant trend.

Age, weight, and body mass index were not related to the final diagnosis, nor was antenatal suspicion of hypertension. Of the 28 women with blood pressures greater than 140/90 mm Hg at less than 20 weeks' gestation, 16 (57%) were later proved to have only gestational hypertension, while 12 (43%) were ultimately found to have chronic hypertension. On the flip side, this means that of the 51 women newly diagnosed with chronic hypertension postnatally, just 12, or 24%, had been hypertensive prior to 20 weeks.

"We must proceed with great caution in both clinical and research practice if a postnatal confirmation of blood pressure is not available following antenatal hypertension," Mr. Waugh remarked.

Another study suggested that gestational hypertension commonly persists post partum, particularly in older women.

Tiina Podymow, M.D., of the division of nephrology and hypertension at Weill Medical College, Cornell University, New York City, reviewed clinic charts of 29 women who developed gestational hypertension or preeclampsia; all had been normotensive prior to pregnancy.

The women had a mean age of 35 years.

Hypertension had developed at gestational age 15-40 weeks, with 13 developing hypertension within 3 days of delivery and the remainder at 1-18 weeks prior to delivery. The average blood pressure was 161/94, and the mean arterial pressure was 116. Eleven women were diagnosed with preeclampsia, and 25 were treated with antihypertensive drugs in the puerperium.

Blood pressure normalized between 0 and 4 weeks post partum in 12 women, between 5 and 12 weeks in 7, and between 13 and 20 weeks in 3. However, blood pressure remained elevated beyond 6 months in seven women, of whom one was found to have primary hyperaldosteronism. This finding suggests that secondary causes of hypertension should be considered in patients with hypertension persisting

beyond 6 months, Dr. Podymow said.

Age was a significant risk factor. The women who remained persistently hypertensive had a mean age of 41 years, compared with 33.5 years among those whose hypertension resolved, she reported.

And few data are available to guide physicians in treating these patients, Susan Sadeghi, M.D., of the University of British Columbia, Vancouver, reported in a poster presentation.

"Peak postpartum blood pressure occurs on days 3-6 after delivery, when most women have already been discharged home. [Yet] there is little information on how best to treat postpartum hypertension in order to minimize maternal hospital stay and optimize maternal safety," she said.

Indeed, in an extensive review of the literature dating back to 1980, only six randomized clinical trials involving 459 women addressed postpartum antihypertensive treatment with regard to maternal and neonatal efficacy and safety outcomes. The largest study involved 266 subjects and the smallest, 18.

Three of the six trials looked at prevention of postpartum hypertension in a total of 315 women. All compared drug vs. placebo or no treatment; two involved oral furosemide 20-40 mg/day, and the other involved nifedipine capsules 10 mg every 4 hours. There were no cases of hypotension, serious maternal morbidity, or maternal death. Only one study—which included just 18 patients—examined maternal length of stay, finding an insignificant difference of 7.3 vs. 7.6 days.

The other three trials were treatment studies that included just 144 women. None compared antihypertensive medication with placebo or no treatment for mild to moderate hypertension. Two of the studies—involving 106 women—compared oral timolol or hydralazine with methyldopa for mild to moderate hypertension, and the third compared hydralazine plus nifedipine with nifedipine alone for severe postpartum hypertension.

There were no maternal deaths in the three treatment studies, and the need for additional antihypertensive therapy did not differ between groups.

Based on these minimal data, Dr. Sadeghi and her associates concluded: "If a clinician feels that antihypertensive therapy is needed, the agent used should be based on his/her familiarity with the drug."

## Hypertension in Pregnancy Raises Heart Disease Risk

VIENNA — Both increasing severity and recurrence of gestational hypertension increase a woman's chances of developing ischemic heart disease later in life, Dr. Anna-Karin Wikström said at the 14th World Congress of the International Society for the Study of Hypertension in Pregnancy.

Long-term measures to prevent hypertension should be undertaken in women who experience severe or recurrent hypertension during pregnancy, said Dr. Wikström of Uppsala University, Stockholm.

Data from three Swedish medical databases were analyzed for more than 400,000 women with first births since 1973 and for more than 200,000 who gave birth to two infants between 1973 and 1982. Only singleton births were included. Women with chronic hypertension and/or diabetes were excluded.

After adjustment for maternal age, socioeconomic status, and hospital category, the relative risk of developing ischemic heart disease (IHD) after 19-28 years' follow-up was 1.6 for the women who had gestational hypertension without proteinuria in their first pregnancies, compared with those who did not have hypertension in their first pregnancies. Among women with preeclampsia the relative risk was 1.9, and among those with severe preeclampsia it was 2.8. All the between-group differences were statistically significant, she said.

In the group with two children, the women who had any degree of hypertensive disease during their first pregnancy but not during the second had a 1.9 relative risk of IHD, compared with those who did not have hypertension in either pregnancy. The relative risk of IHD for women with hypertension in the second pregnancy but not the first was 2.4, and for those with hypertension in both pregnancies, 2.8. The difference between the first-pregnancy and both-pregnancy groups was statistically significant, she noted.

"We don't think that [this] information must be given to all women with gestational hypertensive disease, since it could create a lot of anxiety in a large group of women who will never go on to develop ischemic heart disease," Dr. Wikström said.

But she added that giving such information "could be considered in women with a history of severe or recurrent preeclampsia, or gestation with coexisting, avoidable independent risk factors such as smoking and obesity."

—Miriam E. Tucker

**Determining whether a woman has underlying chronic hypertension can be difficult; thorough postnatal follow-up is essential.**

## Coronary Artery Calcification More Common in RA Patients

SAN ANTONIO — Coronary artery calcification is significantly more prevalent in women with rheumatoid arthritis than in those without the disease, according to the findings of a case-control study.

Such evidence of calcification underscores the need for physicians who treat rheumatoid arthritis to address their patients' cardiovascular health, Amy H. Kao, M.D., said in an interview during the annual

meeting of the American College of Rheumatology.

Dr. Kao and her colleagues at the University of Pittsburgh obtained electron-beam computed tomography scans of the aorta and coronary arteries of 124 postmenopausal women with rheumatoid arthritis and compared them with those of 289 healthy female controls. The result: 68% of the women with rheumatoid arthri-

tis had coronary artery calcification, compared with 45% of the healthy women.

The patients with rheumatoid arthritis were more likely than were the controls to smoke, to have a higher waist-to-hip ratio, and to have a higher diastolic blood pressure. They also were more likely to have low HDL cholesterol levels and were less likely to be taking aspirin, Dr. Kao noted in her poster presentation.

The rheumatoid arthritis patients ranged in age from 50 to 70 years; controls ranged in age from 53 to 65 years.

Overall, 68% of the women with rheumatoid arthritis had coronary artery calcification, 87% had any aortic calcification, and 61% had both. The percentages for the controls were 45%, 74%, and 39%, respectively.

—Timothy F. Kirn