

Hypertension During Pregnancy a Risk Factor for Heart and Kidney Disease Later

Up to 10% of pregnancies may be complicated by hypertension.

REVIEWED BY VESNA D. GAROVIC, MD

Pregnant women who develop hypertension have an increased risk of cardiovascular disease (CVD) and kidney disease later in life, according to a report presented at the American Society of Nephrology's (ASN) 39th Annual Meeting and Scientific Exposition in San Diego.

"Along with menopause and hormone use, hypertensive pregnancy diseases may contribute to gender-specific differences in the clinical course and outcomes of CVD," said Vesna D. Garovic, MD, of the Mayo Clinic in Rochester, Minnesota, lead author of the study. "Improved screening, prevention, and treatment strategies may not only optimize management of problems related to high blood pressure during pregnancy, but also have a long-term impact on women's cardiovascular events and outcomes years after the affected pregnancies," said Dr. Garovic in an ASN news release.

Dr. Garovic and her colleagues analyzed data on 4,782 women with a high family risk of hypertension from the study of the National Heart, Lung and Blood Institute Family Blood Pressure Program (FBPP). Six hundred forty-three women had hypertensive problems during a previous pregnancy. Rates of CVD events — such as myocardial infarction and stroke — were compared with those of women who had normotensive pregnancies or who had never had a pregnancy lasting >6 months.

HIGHER RATES OF CVD EVENTS

Women who had hypertension during pregnancy had significantly higher rates of various types of CVD events after age 40. For example, the risk of stroke was twice as

Women who develop hypertension during pregnancy are also more likely to develop hypertension when they get older.

high as in women with normotensive pregnancies, while the risk of coronary heart disease events was 1.5 times higher. Women with hypertensive pregnancies were also 1.5 times more likely to develop hypertension after 40 years of age.

Hypertension during pregnancy was also associated with an increased risk of microalbuminuria.

GENOA

The investigators studied the effects on novel risk factors among 1,755 women within the Genetic Epidemiology Network of Arteriopathy (GENOA) study of the FBPP. In GENOA, women with hypertensive pregnancies had higher levels of C-reactive protein and homocysteine. This association was true both with body mass index measures added in ($P=.03$ and $P=.008$) and removed ($P<.001$ and $P=.002$, respectively) from multiple regression models.

According to the ASN, hypertension affects 10% of pregnancies in the United States and remains a leading cause of health problems and death for both mother and baby. "Traditionally, these hypertensive pregnancy disorders — including . . . preeclampsia — have not been con-

sidered to have any long-term impact on the mother's health," said Dr. Garovic. "However, our results support the role of hypertension during pregnancy as a risk factor for CVD later in life."

What explains the link between hypertensive pregnancy disorders and the development of CVD later in life? "It may be that these disorders, especially pre-eclampsia, share common risk factors with CVD, such as obesity, diabetes and kidney disease," said Dr. Garovic. "Or, it may be that hypertension in pregnancy induces long-term metabolic and vascular abnormalities, which may lead to an increase in overall CVD risk later in life."

High blood pressure during pregnancy is an underrecognized risk factor for CVD, the researchers believe. "When assessing a woman's overall risk profile for CVD, doctors should screen for hypertensive disorders of pregnancy," concluded Dr. Garovic. "We suggest that women with hypertensive pregnancies be monitored closely for asymptomatic cardiovascular events and treated aggressively for modifiable risk factors." ■

Vesna D. Garovic, MD is in the division of nephrology and hypertension at the Mayo Clinic. She may be reached at garovic.vesna@mayo.edu.

Garovic VD, Bailey KR, Kullo IJ, et al. Hypertension in pregnancy is associated with microalbuminuria and cardiovascular events later in life. TH-FC050. Presented at the American Society of Nephrology's 39th Annual Meeting and Scientific Exposition. Nov 16-19, 2006. San Diego.

HYPERTENSION AND PREGNANCY

Chronic hypertension, that is hypertension diagnosed before pregnancy or before 20 weeks gestation, complicates from 1% to 5% of all pregnancies, according to the Agency for Healthcare Research and Quality (AHRQ). The incidence is expected to rise as the demographic trend towards childbearing at older ages continues.

Chronic hypertension in pregnancy is associated with:

- serious maternal and fetal complications, including superimposed preeclampsia;
- fetal growth retardation;
- premature delivery;
- placental abruption and
- stillbirth.

Superimposed preeclampsia accounts for much of the increased risk of complications. The complications have significant economic impact, including costs of treating sick mothers and neonates and costs of intensive antenatal monitoring aimed at early detection of complications.

Source: AHRQ. Available at: www.ahrq.gov/clinic/epcsums/pregsum.htm. Accessed on: Dec. 7, 2006.

DiabeticMCToday.com

DiabeticMCToday.com

DiabeticMCToday.com

DiabeticMCToday.com

DiabeticMCToday.com

DiabeticMCToday.com

DiabeticMCToday.com

DiabeticMCToday.com

DiabeticMCToday.com

DiabeticMCToday.com

DiabeticMCToday.com

DiabeticMCToday.com

visit www.diabeticmctoday.com for the current issue and complete archives

DiabeticMCToday.com

DiabeticMCToday.com