

Aspirin, Heparin Show Preeclampsia Benefits

Outcomes improved in those with preeclampsia and a low-birth-weight infant in a previous pregnancy.

BY MIRIAM E. TUCKER
Senior Writer

VIENNA — The use of low-molecular-weight heparin together with low-dose aspirin can improve pregnancy outcomes in women who previously had preeclampsia and low-birth-weight infants, Sergio Ferrazzani, M.D., reported.

Women with preeclampsia and low-birth-weight infants in their first pregnancy have double the recurrence rate of preeclampsia in their second pregnancy, compared with those who did not have preeclampsia previously. Infants of those subsequent pregnancies are at increased risk for fetal growth restriction and low birth weight. Data suggest that preeclampsia and fetal growth restriction might share one or more pathophysiologic mechanisms, noted Dr. Ferrazzani of the Catholic University of the Sacred Heart, Rome.

An electronic database search of records from his hospital's high-risk pregnancy

ward yielded data on 54 women with previous preeclampsia associated with low birth weight and/or intrauterine growth retardation who were negative for antiphospholipid antibody. The women had not been treated with aspirin during a previous pregnancy, he said at the 14th World Congress of the International Society for the Study of Hypertension in Pregnancy.

Of those 54 women, 23 gave birth during 1990-1996, when hospital policy called for thromboprophylaxis with low-dose (100 mg/day) aspirin alone (ASA); the 31 women who delivered during 1997-2003 were treated with the same daily dose of aspirin plus low-molecular-weight heparin (4,000 units subcutaneous enoxaparin).

Aspirin was prescribed from the 22nd day of the menstrual cycle and was discontinued after 36 weeks' gestation. The low-molecular-weight heparin (LMWH) was prescribed after results of a positive pregnancy test were received, and was continued until delivery.

The women were similar with regard to demographic and anthropomorphic characteristics. About 20% of the women in each group had chronic hypertension, and almost as many (17% in the ASA alone group and 19% in the ASA-LMWH group) had more than one previous pregnancy complicated by preeclampsia.

Gestational age at delivery of the treated pregnancy was higher in both groups, compared with the women's first pregnancies, but the improvement was greater for those in the ASA-LMWH group. The increase was 32.1 vs. 34.8 weeks for women treated with ASA alone, compared with 30.9 vs. 36.4 weeks for women treated with ASA-LMWH.

Similarly, the proportion of women with small-for-gestational-age fetuses, which was 100% among all the first pregnancies, dropped to just 35% with ASA treatment alone and to 16% with ASA-LMWH treatment. Both groups showed a birth weight improvement, but the ASA-LMWH group's increase was nearly double that of the group treated with ASA alone (1,372 g vs. 2,017 g in the ASA group and 1,197 g vs. 2,600 g in the ASA-LMWH group).

In both groups, there were six intrauterine deaths among the first pregnancies and none in the treated pregnancies. Neonatal deaths dropped from 6 to 3 with ASA and from 11 to 1 with ASA-LMWH. Only the ASA-LMWH drop was statistically significant, he noted.

Preeclampsia (in 100% of all the first pregnancies) occurred in 30% of the subsequent ASA-treated pregnancies, compared with just 3% of pregnancies treated with both ASA and LMWH.

Among the 11 patients with chronic hypertension, the mean gestational age at delivery and the mean birth weight were also significantly greater among the infants of the 6 patients from the ASA-LMWH group, compared with those of the 5 ASA patients, Dr. Ferrazzani added.

None of the women treated with ASA-LMWH developed heparin-induced thrombocytopenia or thrombotic episodes, and there was no clinical evidence of heparin-induced osteoporosis. Mild bruising at the injection site—which was considered to be confirmatory of self-administration of the anticoagulant—was the only complication noted with heparin therapy, he said. ■

Gestational Hypertension Linked To Later Ischemic Heart Disease

BY MIRIAM E. TUCKER
Senior Writer

VIENNA — Both increasing severity and recurrence of gestational hypertension increase a woman's chances of developing ischemic heart disease later in life, Anna-Karin Wikström, M.D., 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.

While sharing this information with all gestational hypertension patients might create unnecessary anxiety, it "could be considered in women with a history of severe or recurrent preeclampsia," Dr. Wikström said. ■

Up in Smoke: Cigarettes Are No Protection Against Preeclampsia

BY MARY ANN MOON
Contributing Writer

WASHINGTON — A paradoxical benefit of cigarette smoking during pregnancy finally may have been explained.

Smoking has long been linked to a decreased rate of preeclampsia. But rather than protecting against the disorder, smoking may mask the true incidence of preeclampsia by indirectly inducing preterm delivery, so that smokers' infants are simply born before preeclampsia can be manifested, Ahmad O. Hammoud, M.D., said at the annual meeting of the Central Association of Obstetricians and Gynecologists.

A 1999 study published in the *New England Journal of Medicine* found that the risk of developing preeclampsia was 32% lower in women who smoked than in nonsmokers. And most studies—a total of 99—cited in a review of the literature since 1959 also showed that smoking was associated with decreased risk. But this link "has always been questioned," because it is counterintuitive that smoking could benefit pregnancy and because many of these studies had relatively small sample sizes, said Dr. Hammoud, a fourth-year resident in the department of ob.gyn. at Wayne State University, Detroit.

He and his associates examined the issue using a large German database of 170,254 singleton deliveries that took place at 29 hospitals across Germany during the late

1990s. Mean maternal age was 29 years. Overall, 23% of the women were smokers, and the overall rate of preeclampsia was 3.5%.

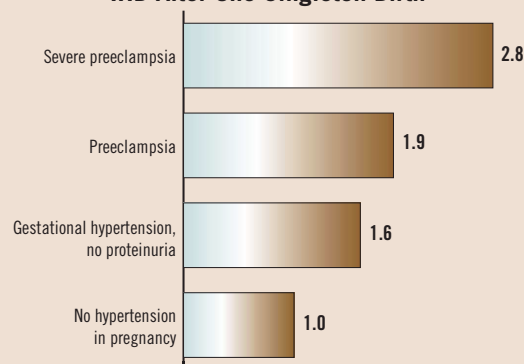
The incidence of preeclampsia was 2.5% among nonsmokers, compared with only 1.9% among smokers. Moreover, the incidence of preeclampsia showed a clear inverse correlation with the number of cigarettes smoked per day. Nonsmokers had the highest rate of preeclampsia, followed by women who smoked 1-5 cigarettes per day, then by women who smoked 6-10 cigarettes per day, and finally, by women who smoked more than 10 cigarettes per day.

"The new finding in our study was that the incidence of preeclampsia was not uniformly low in all smokers. It increased with advancing gestational age and was especially high in smokers who made it to 40 weeks or more," Dr. Hammoud said.

"We postulate that placental damage from smoking leads to severe complications, such as placental abruption and restricted fetal growth, which in turn lead to preterm delivery before preeclampsia is manifested. So what smokers actually have is just an apparent decrease in preeclampsia," he said.

This hypothesis is supported by the finding that smokers had a higher rate of placental abruption than nonsmokers and that fetal weight was adversely affected by smoking in a dose-response fashion, he noted. ■

Relative Risk of Developing IHD After One Singleton Birth



Source: Dr. Wikström