Labetalol Holds Advantages Over MgSO4 In Preventing Eclampsia, Early Data Suggest

V I E N N A — Labetalol may be a viable alternative to magnesium sulfate for the prevention of eclampsia, Jennifer Warren, M.D., said at the 14th World Congress of Hypertension in Pregnancy. Previous data from Dr. Warren's colleagues at the University of Utah, Salt Lake City, suggest that labetalol reduces cerebral perfusion pressure while maintaining cerebral blood flow.

It is potentially an ideal agent for preventing eclampsia, which is believed to be the result of cerebral overperfusion (hypertens. Pregnancy 2002;21:185-97).

Labetalol also offers several advantages over MgSO4, including its lack of life-threatening side effects (MgSO4 is a respiratory and cardiac depressant). Labetalol has a rapid onset of action with sustained antihypertensive effects and can be administered orally with minimal need for monitoring; MgSO4 is given parenterally. In addition, labetalol is less expensive than MgSO4, according to Dr. Warren.

She presented preliminary data for the first 202 participants in the Labetalol Versus Magnesium Sulfate for the Prevention of Eclampsia Trial (LAMPIET), an international, multicenter, nonblind randomized controlled trial in which women with preeclampsia received either labetalol (200 mg orally every 4 hours, with additional intravenous doses every 20 minutes based on blood pressure measurements) or magnesium (6.6 IV bolus followed by 2-g IV continuous infusion, with intravenous hydralazine if blood pressure remains uncontrolled after 20 minutes).

Institutions were permitted to substitute their own regimens for these. All medications were administered until 24 hours postpartum.

The 115 women randomized to labetalol were similar to the 87 who received MgSO4, with regard to demographics such as maternal age, gestational age, race, height, and weight. Adequate data, including blood pressure, lab values, history, and symptoms, also did not differ.

Seizures occurred in 1.7% of the labetalol group (two women) and 2.3% of the MgSO4 group (two women), which was not a significant difference. All the seizures occurred at one institution where blood pressure control protocol violations were subsequently documented, Dr. Warren noted.

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Preeclampsia was diagnosed in 2.9% of the black women and 2.6% of the Hispanic women, at least double the rates among white (1.3%) and Asian (1.2%) women, Dr. Rosenberg reported during her presentation at the meeting.

After adjustment for significant predictors of preeclampsia—which included age older than 35, black or Hispanic ethnicity, low socioeconomic status, and chronic diabetes and/or hypertension—the risk for preeclampsia was 1.8 times greater for women who weighed 200-299 pounds, compared with those weighing 100-149 pounds, the investigators found.

The risk was elevated 2.6-fold among women weighing at least 300 pounds.

Moreover, preeclampsia was 1.5 times as common among the women who gained more than 40 pounds during pregnancy, compared with those who gained less weight.

Those elevated risks did not differ significantly after 4,036 women with chronic diabetes and/or hypertension were removed from the analysis, Dr. Rosenberg noted.

The majority of both obese and nonobese women delivered at 37 weeks or later, whereas the proportions delivered at sooner than 34 weeks—6.3% in the obese group vs. 9.9% of the normal-weight group—were not significantly different between the two groups.

Baby births to obese women had a significantly greater mean birth weight (3,033 grams vs. 2,833 grams), and a significantly smaller percentage of their babies weighed less than 2,500 grams (24% vs. 32%).

Preliminary deaths did not differ between the obese and nonobese groups, according to the study.

This study differs from others that have found an association between obesity and the development of preeclampsia in that most of those data involved women who were originally normotensive, Dr. Barton noted.

These findings support previous recommendations for frequent antepartum monitoring of all women with hypertension, including twice-weekly fetal heart rate testing accompanied by weekly amniotic fluid volume estimation beginning at the time of diagnosis.

In addition, daily kick counts should be considered at the beginning of the third trimester Dr. Barton recommended.

Abnormal nonstress tests or amniotic fluid elevations should be followed by a comprehensive maternal and fetal evaluation, he advised.