

## Epidural Choice Appears Independent of Ethnicity

BY HEIDI SPLETE

WASHINGTON — When equal access to epidural anesthesia is available, patient ethnicity is not a factor in choosing whether to have an epidural, according to results of a study of 797 consecutive women with singleton pregnancies at a hospital in Flushing, N.Y.

Although epidural anesthesia is widely available in the United States, previous studies have suggested that ethnic disparities persist in the provision of epidurals, according to Dr. Isaac P. Lowenwirt of the New York Hospital Queens, Flushing.

To describe the use of epidural anesthesia during labor in a multiethnic population, Dr. Lowenwirt and his colleagues conducted a prospective study of 800 consecutive singleton pregnancies at a single hospital.

The average age of the women across all ethnic groups ranged from 27 to 32 years. Women who had multiples, malpresentation, or planned cesarean deliveries were excluded from the study.

Complete data from 797 women were presented in a poster at the annual meeting of the Society for Obstetric Anesthesia and Perinatology.

The women were offered three options: parenteral fentanyl, patient-controlled anesthesia (bupivacaine), or no medication. The severity of pain was measured with a visual analog scale.

Overall, 82% of the patients chose an epidural.

The average baseline pain scores were higher among the women who chose an epidural, compared with those who did

not (8.8 vs. 3.7). But there was no significant difference in epidural use among the ethnic groups, and patients in all groups reported similarly effective pain relief after epidural placement.

The ethnic groups were defined as white (103 patients), black (78 patients), Hispanic (150 patients), Chinese or Korean (338 patients), Indian (67 patients), and other ethnicities (61 patients).

**Chinese or Korean patients averaged the shortest duration of analgesia, and black patients averaged the longest duration (141 vs. 185 minutes).**

Socioeconomic factors and maternal education were not factors in the use of an epidural, Dr. Lowenwirt reported.

In addition, nulliparous women were four times more likely to choose an epidural than multiparous women, regardless of ethnicity.

On further analysis, Chinese or Korean patients averaged the shortest duration of analgesia, and black patients averaged the longest duration (141 minutes vs. 185 minutes).

And there was a significant difference in average bupivacaine use between the group with the highest use (Hispanic patients) and the lowest use (Chinese or Korean patients).

The Hispanic patients who chose bupivacaine averaged 7.3 mg/hr, compared with an average of 5.5 mg/hr for the Chinese or Korean patients who chose bupivacaine, he said.

The results suggest that when equal access to epidural analgesia is available, women of all ethnic groups choose it in similar proportions, compared with no medication, the researchers wrote in the poster.

Dr. Lowenwirt said he had no financial conflicts to disclose. ■

## Pregnant Women's Snoring May Not Affect Fetal Outcomes

BY HEIDI SPLETE

WASHINGTON — Pregnant women's snoring has no apparent negative impact on fetal outcomes, despite some differences in fetal umbilical arterial blood gases, based on data from two studies including more than 600 women.

Previous research has suggested that habitual snoring in pregnant women may be a risk factor for poor fetal outcomes, but the available data were primarily from case studies, said Dr. Alexandra Bullough and Louise O'Brien, Ph.D., of the University of Michigan in Ann Arbor.

As part of a larger study of the impact of sleep-disordered breathing (SDB) on both maternal and fetal outcomes, the researchers recruited 380 women aged 18 years and older in the third trimester of singleton, uncomplicated pregnancies to complete sleep questionnaires. This study is the first known to examine the impact of maternal SDB on fetal outcomes after delivery, based on umbilical blood gas values for arterial pH, partial pressure of carbon dioxide (PCO<sub>2</sub>), HCO<sub>3</sub>, and base excess.

Overall, 129 women met the criteria for SDB, and they were compared with 251 nonsnoring controls. The women with SDB averaged a significantly higher body mass index than controls both before pregnancy (35 kg/m<sup>2</sup> vs. 25 kg/m<sup>2</sup>) and during pregnancy (35 kg/m<sup>2</sup> vs. 28 kg/m<sup>2</sup>).

In this study, there were no significant differences between the SDB and control groups in average measures of arterial pH (7.3 vs. 7.3), PCO<sub>2</sub> (54.4 mm Hg vs. 57.4 mm Hg), HCO<sub>3</sub> (23.6 mmol/L vs. 24.4 mmol/L), and base excess (-1.82 mmol vs. -1.85 mmol).

These preliminary findings suggest

that maternal SDB may not be associated with adverse fetal outcomes. But the study is ongoing, and data that haven't yet been fully analyzed suggest a possible association. "We're not sure how [maternal SDB] might affect fetal outcome," Dr. Bullough said in a poster presentation at the annual meeting of the Society for Obstetric Anesthesia and Perinatology.

Habitual snoring was not significantly associated with low birth weight or Apgar scores, based on a second study of 429 women with uncomplicated singleton pregnancies. In this study, also conducted by Dr. O'Brien and Dr. Bullough, 35% of the women reported habitual snoring (at least 3 nights each week) and 25% were obese (with a BMI of at least 30 kg/m<sup>2</sup>). The women's snoring was assessed through sleep questionnaires, and fetal outcomes were determined by reviewing obstetric records.

Overall, habitual snoring was not significantly associated with low birth weight and Apgar scores. These results held after controlling for variables including maternal diabetes, age, and race. Only the gestational age at delivery and the mother's BMI before pregnancy were independent significant predictors of birth weight and 1-minute Apgar scores, and only gestational age at delivery was an independent and significant predictor of 5-minute Apgar scores. Regardless of sleep apnea status, "women with high BMI were going to have bigger babies," Dr. Bullough said.

These results contrasted with previous studies suggesting that maternal sleep apnea may predict poor infant outcomes, and more research is needed to evaluate the association.

The researchers said they had no financial conflicts to disclose. ■

## Hyperemesis Gravidarum Symptoms May Persist Post Partum

BY BETSY BATES

CHICAGO — Many women with severe hyperemesis gravidarum experience clinical symptoms that persist well beyond delivery, a survey shows.

A 2-year online survey coordinated through the nonprofit Hyperemesis Education & Research Foundation compared postpartum symptoms in 891 women diagnosed with hyperemesis gravidarum (HG) (162 of whom received parenteral nutrition) and 541 controls who did not experience weight loss during pregnancy from severe nausea and vomiting, researchers reported at the annual meeting of the American College of Obstetricians and Gynecologists.

Highly significant differences were seen in both the prevalence and duration of numerous postpartum symptoms between women with HG and controls, reported Dr. Gerson D. Hernandez of the University of Southern California, Los Angeles.

These symptoms included:

- ▶ Food aversions (34% vs. 6%).
- ▶ Gastroesophageal reflux (23% vs. 5%).
- ▶ Digestive problems (21% vs. 3%).
- ▶ Continued nausea (13% vs. 5%).
- ▶ Gallbladder problems (9% vs. 2%).
- ▶ Persistent fatigue (52% vs. 25%).
- ▶ Muscle weakness (24% vs. 8%).

The subgroup of women who required parenteral nutrition during pregnancy had the highest prevalence of persistent postpartum nausea, fatigue, and muscle weakness—symptoms that in some cases lasted months or even longer.

Fatigue, for example, persisted beyond a year in 23% of these women, and food aversions, in 17%.

"It has been the common clinical impression that all symptoms associated with HG resolve after pregnancy. This is the case for the majority of HG cases, but not all, as we can see in our results," Dr. Hernandez said in an interview.

Clearly, more needs to be known about what is different about the subgroup of women with severe HG, particularly those with long-lasting postpartum symptoms, he added.



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DR. HERNANDEZ

"The etiology of these symptoms, as well as the cause of their intensity and duration in this subgroup of the pregnant population remains unknown," he said.

Hypotheses range from psychological—behavior modification during months of pregnancy leading to long-

term food aversion—to physical, including theories about long-term consequences of "the marked nutritional deprivation that these women undergo," Dr. Hernandez noted.

"We do know that there is something different about them that makes them still have problems after pregnancy," he said.

A goal of the research team is to focus on ways to identify women most at risk for severe HG and to develop and implement a comprehensive management plan for them during and after their pregnancies, said Dr. Hernandez.

He was assisted in the research by associates from the USC department of obstetrics and gynecology and division of maternal-fetal medicine in Los Angeles, and the Hyperemesis Education & Research Foundation of Leesburg, Va.

None of the investigators reported conflicts of interest relevant to the study. ■