

Gum Disease Again Tied to Pregnancy Outcomes

Women with periodontal disease had higher rates of low-birth-weight babies, preterm births in a small study.

BY JANE SALODOF MACNEIL
Southwest Bureau

LOS ANGELES — A small study adds to the growing body of evidence implicating periodontal disease in poor pregnancy outcomes.

Twelve percent of women with periodontal disease had low-birth-weight babies in a 277-patient observational study. In comparison, only 2% of women with healthy gums had small babies, a statistically significant difference.

The data were presented in poster form at the annual meeting of the Society for Gynecologic Investigation.

The women with periodontal disease also had a higher incidence of preterm births (7% vs. 3%) but Alexis L. Shub,

M.D., an investigator in the study, said this difference was not statistically significant. About 15% of women in the study had periodontal disease.

An updated analysis completed just before the meeting also found higher rates of tumor necrosis factor- α in the cord blood of women with periodontal disease, Dr. Shub, an obstetrician at the University of Western Australia in Perth, said in an interview.

These data were not included in the poster presentation, she noted, adding that the findings suggest an ongoing inflammatory process in these women and their fetuses.

John P. Newnham, M.D., who is the study's lead author and director of the Women and Infants Research Founda-

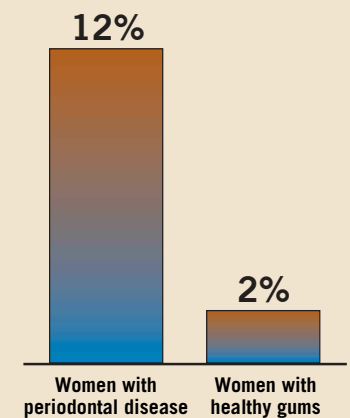
tion at King Edward Memorial Hospital in Perth, said in an interview that he is also working on a large, randomized controlled trial to study this issue. The investigators have begun to divide 1,000 pregnant women with periodontal disease into two cohorts: one given periodontal care during pregnancy and the other afterward. The trial's primary outcomes will be preterm birth, fetal growth, and preeclampsia.

He said the investigators are concerned that heightened awareness of possible harm from periodontal disease could skew outcomes. They suspect screening patients for periodontal disease in the observational study led to better dental care. The preterm birth rates were expected to be about 11%, according to Dr. Newnham, who also plans to monitor pregnancy outcomes and prenatal care in a region-wide medical database.

"The exciting thing is that it is possible

that a simple community-based public health intervention could have a profound impact on the need for expensive high-tech hospital resources," he said. ■

Percentage of Women Who Had Low-Birth-Weight Babies



'Super Obese' Parturients May Account for Higher C-Section Rates

BY BETSY BATES
Los Angeles Bureau

PALM DESERT, CALIF. — There may be a threshold of morbid obesity associated with a sharply increased risk of nonelective cesarean delivery that is not shared by less obese women, according to results of a preliminary study presented at the annual meeting of the Society for Obstetric Anesthesiology and Perinatology.

The issue may have clinical implications for management of women at the lower ranges of morbid obesity who may wish to undergo labor without early and aggressive epidural management in anticipation of a probable cesarean section.

In their study, investigators at the University of Michigan, Ann Arbor, looked for a linear increase in cesarean deliveries as obesity increased, but instead found that nonelective cesarean deliveries did not significantly increase until body mass indexes rose above 46.

At the highest ranges of obesity, a very significant increase in nonelective C-sections was seen in the study of 226 parturients: 58% of those with a BMI of 47-88, compared with 39% for women with BMIs between 30 and 46.

Monica Riesner, M.D., of the department of anesthesiology at the University of Michigan, presented the findings on behalf of a colleague, Jill Mhyre, M.D., who could not attend the meeting.

Dr. Mhyre and associates studied the charts of obese parturients who delivered vaginally or by nonelective C-section at their institution between 1999 and 2002. Women undergoing elective C-sections were not included in the analysis.

Among the patients meeting study criteria, 62 had a BMI between 30 and 39.9 (defined as obese by the Institute of Medicine); 116 had a BMI between 40 and 49.9, and 48 had a BMI between 50 and 88. A BMI greater than 50 has been proposed by some authors to constitute a new category, the "super obese."

The mean BMI in the cohort was 44.5. The mean age was 28 years.

Nonelective C-section occurred in 58% of those with a BMI of 47-88 and 39% of those with BMIs between 30 and 46.

Fourteen percent of the group had diabetes, 14% had preeclampsia, one-fifth had asthma, and a quarter smoked.

Slightly more than half of the women delivered vaginally.

The nonelective C-section rate was 42% in women with BMIs between 30 and 39, and 45.7% for those with BMIs between 40 and 88, a nonsignificant difference.

In fact, a statistically meaningful difference in C-section rates was not observed in women with BMIs lower than 46, although they were significant at every cut point of BMIs above that level.

The single-institution study was not sufficiently powered to determine an absolute threshold for increased cesarean risk, which investigators hypothesized "may be as high as 50 or even 55," said Dr. Riesner.

Stepwise logistic regression analyses found that a BMI greater than 46 was independently associated with more than a twofold increase in the risk of C-section.

Parity appeared to be protective in less obese women, but not in those women with a BMI of 47 or higher.

A more comprehensive study is underway using a new electronic records system to capture more cases, with the aim of shedding more light on the findings of this preliminary study.

At this point, it appears to be reasonable to continue to encourage women with very high BMIs to allow early epidural analgesia, Dr. Riesner said.

If the findings are confirmed, less obese women may be safely managed without an epidural if they meet such criteria as a history of vaginal delivery at the same maternal weight; reassuring maternal airway findings upon examination; and good progression of labor and fetal status, she said.

An audience member praised the study and called for more research, since she recently learned that labor nurses at her institution were discouraging super-obese parturients from having epidural anesthesia during labor, since they are difficult to move following a motor block. ■

Gaps Found in Parturient Resuscitation Knowledge

PALM DESERT, CALIF. — Obstetricians, emergency physicians, and anesthesiologists may suffer significant knowledge gaps when it comes to resuscitation of parturients, suggest survey results presented in poster form at the annual meeting of the Society for Obstetric Anesthesia and Perinatology.

Faculty and residents in all three groups of specialists at Stanford (Calif.) University responded to an 11-question anonymous survey covering four critical knowledge areas concerning parturient resuscitation after catastrophic events leading to cardiorespiratory arrest:

- ▶ Awareness of the need for left uterine displacement.
- ▶ Recall of specific standard advanced cardiac life support (ACLS) algorithms.
- ▶ Knowledge of pertinent maternal physiology.
- ▶ Awareness of the recommendation to perform cesarean section in parturients at more than 20 weeks' gestation after 5 minutes of unsuccessful resuscitation for cardiac arrest.

Among 74 respondents, anesthesiologists answered the most questions correctly (average 76%). They were also better informed than other specialists about relevant maternal physiology.

Emergency physicians scored highest on questions regarding ACLS algorithms, averaging 93% correct responses.

All three groups earned similar scores on questions relating to left uterine displacement during resuscitation and the 5-minute cesarean rule. However, the rate of correct responses to those questions was low, at 60%-75%, said Leslie C. Andes, M.D., of the Stanford department of anesthesiology, and her associates.

They recommended that residents in all three specialties be required to complete ACLS certification, with an emphasis on the special resuscitation needs of parturients.

The issue may be of critical importance. Investigators pointed to findings in "Why Mothers Die 2000-2002," a confidential analysis conducted in the United Kingdom that concluded some degree of substandard care was involved in more than 50% of maternal deaths and that most were preventable.

A lack of properly performed, timely resuscitation was implicated in some of those deaths.

"Catastrophic events leading to cardiorespiratory arrest may necessitate the resuscitation of pregnant women not only in labor and delivery suites, but also in other hospital locations," Dr. Andes and her associates noted in the poster.

—Betsy Bates