

# SOUTHWESTERN NEWS

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## NEW STUDY CONTRADICTS LINK BETWEEN CAESAREAN-SECTION RATES AND EPIDURALS

DALLAS – December 4, 1997 – Contradicting their earlier findings, a team of investigators from UT Southwestern Medical Center at Dallas has shown that epidural analgesia does not raise the rate of Caesarean sections among patients in the late stages of labor.

The anesthesiologists and obstetricians/gynecologists believe their initial study, conducted in 1995, was methodologically flawed. The results of their most recent research are published in the journal *Anesthesiology*.

The administration of local anesthetics and opioids through epidural injections has been an increasingly popular method for pain control during labor but considered controversial because of research linking epidurals to complications leading to Caesarean sections.

"We wanted to take a second look at the relationship between the Caesarean rates and epidurals because of a flaw in the earlier protocol," said principal investigator Dr. Shiv K. Sharma.

The new study clearly shows that "epidural analgesia has no effect on Caesarean section birth rates," said Sharma, an assistant professor of anesthesiology and pain management.

In the new study, 715 were selected to receive epidural analgesia, which continuously injects pain killer into a space near the spine through a catheter, or patient-controlled intravenous meperidine analgesia, delivered via a pump, during the late states of labor. Patient-controlled intravenous analgesia is widely used in the United States to manage postoperative pain although its use during childbirth has been limited. Five hundred and two women completed the study - 243 had epidurals and 259 used the intravenous pump. The others progressed too rapidly to delivery or refused pain relief.

Women were switched to the alternative method if their analgesia was inadequate. Only five of the women switched from self-administered pumps to epidurals. Women receiving epidurals reported lower pain scores during labor and delivery compared to the patient-controlled pump patients, he said.

There was no significant difference between the two groups in incidence of Caesarean deliveries: 12 women (5 percent) who had received epidurals underwent Caesarean sections, and 14 women (6

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percent) who had been on the pump had Caesarean sections. Epidural analgesia prolonged the first stage of labor by about an hour and increased the likelihood of a low-forceps delivery. Eighteen women who had epidurals experienced a low-forceps delivery vs. eight who used the pump.

Many retrospective studies, including the 1995 UT Southwestern study, have shown an association between the use of epidural analgesia and an increase in Caesarean sections. Because those studies were conducted through a review of patient records, they suffered a selection bias, Sharma said. Many of the women in the control group receiving narcotics for pain relief switched to epidurals.

"The pain itself may have been an indication of complications that would lead to the necessity for Caesarean sections," he said.

Dr. Susan Ramin, associate professor of obstetrics and gynecology and principal investigator on the 1995 paper, said the later research represents a much better study. While the use of epidurals has been steadily increasing, the incidence of Caesarean sections has not, she noted.

The new study is significant because while epidurals have clearly shown to be superior for pain relief during labor and delivery, some women and physicians have been hesitant to use them because of the association with Caesareans. Also, some insurance companies and health maintenance organizations have resisted authorizing the administration of epidurals, fearing the higher costs of delivery via Caesarean, Sharma noted.

This study also suggests that intravenous patient-controlled analgesia is a suitable method of pain relief during labor. Although the mothers were visibly sedated during labor, nearly 65 percent of the women reported good to excellent pain relief with the pump, and 70 percent said they would use that type of analgesia during a future delivery.

Other authors on the paper are Dr. J. Elaine Sidawi, assistant professor of anesthesiology and pain management and obstetrics and gynecology; Dr. Michael J. Lucas, associate professor of obstetrics and gynecology; Dr. Kenneth Leveno, professor of obstetrics and gynecology; and Dr. Gary Cunningham, chairman of obstetrics and gynecology, the Jack A. Pritchard Professor in Obstetrics and Gynecology and holder of the Beatrice and Miguel Elias Distinguished Chair in Obstetrics and Gynecology.

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