

Nondrug Options for Labor Pain Rival Opioids

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SAN FRANCISCO — When it comes to relieving labor pain, there's nothing like an epidural.

Beyond that, however, some nonpharmacologic strategies compete well with opioids, the next most common pharmacologic option for treating labor pain, Judith T. Bishop said at a meeting on antepartum and intrapartum management sponsored by the University of California, San Francisco.

Nonpharmacologic techniques should be considered for women who arrive at the labor and delivery room too late to get an epidural, women who want to try an unmedicated birth, or women who want to incorporate nonpharmacologic options as stepping-stones to possible use of pain-relieving medications later in labor, she said.

Epidurals or spinal analgesia were used by 76% of 1,573 women delivering singletons in U.S. hospitals who were surveyed for the 2006 Listening to Mothers II Survey Report. Among those who received epidurals or spinal analgesia, 81% said that they were very helpful, according to the report compiled for the nonprofit organization Childbirth Connection by Eugene R. Declercq, Ph.D., professor of maternal and child health at Boston University, and associates.

Besides epidurals, "immersion in a tub or hands-on techniques came up a little bit above the effectiveness of narcotics" for relieving labor pain, although they were used less often than narcotics, said Ms. Bishop, a certified nurse-midwife and professor of ob.gyn. and reproductive sciences at the University of California. "Many of the other nonpharmacologic techniques are not far behind" in effectiveness. (See box.)

Overall, 69% of women used one or more nonpharmacologic techniques to relieve discomfort in labor. Ms. Bishop reviewed the evidence for some nonpharmacologic strategies identified as effective by one of three published reviews of the literature:

► **Continuous labor support.** This category is a catchall of steps taken usually by a doula, midwife, or nurse. It typically includes touch, massage, application of cold or heat, and other strategies for physical comfort plus emotional support, a steady

flow of information to the mother, and facilitation of communication between the mother and the health care providers.

A 2003 Cochrane meta-analysis of 15 randomized, controlled studies with 12,791 women found significant decreases in use of regional analgesia, forceps, or cesarean births and increased likelihood of vaginal birth with continuous labor support. Women reported 33% less dissatisfaction with labor regardless of pain, compared with unsupported control groups.

► **Water immersion.** Putting a laboring woman in a bath of warm water was associated with decreased pain (particularly during the first 30 minutes) and decreased use of epidurals, according to a 2004 Cochrane meta-analysis of eight randomized, controlled trials with 2,939 women. Two studies found that tub immersion during early labor (before 5-cm dilation) may prolong labor. Individual studies found fewer fetal malpositions in tub-immersed women and no increased rate of infection in those who rupture membranes while in the tub.

► **Hypnosis.** Hypnotic pain relief techniques, or "hypnobirthing," carry the disadvantages of time and costs needed for training, and the lengthy time needed to implement this practice. A 2006 Cochrane review of five trials with 749 women found suggestions of effectiveness in decreasing the need for pharmacologic pain relief and increasing vaginal deliveries and patient satisfaction with pain relief. No adverse outcomes were seen, but hypnosis generally is contraindicated in women with a history of psychosis, she added.

► **Intradermal water injections.** Four randomized, controlled studies found significant reductions in severe back pain for 45-90 minutes, but no decrease in requests for medication for abdominal pain using this strategy. Intradermal water injections involve injecting 0.05-0.1 mL of sterile water into four locations on the lower back—two over each posterior superior iliac spine, and two located 3 cm below and 1 cm medial to the posterior superior iliac spine. Injections seem to be more effective earlier rather than later in labor.

► **Acupuncture.** Although the overall evidence that acupuncture can reduce labor pain is encouraging, "it is difficult to find an acupuncturist willing to be on call to come into labor" rooms, Ms. Bishop said. ■

Selected Strategies for Relieving Labor Discomfort

Strategy	Overall Use	Very Helpful	Somewhat Helpful
Epidural/spinal analgesia	76%	81%	10%
Immersion in tub or pool	6%	48%	43%
Hands-on techniques	20%	41%	51%
Narcotics	22%	40%	35%
Use of birthing ball	7%	34%	33%
Shower	4%	33%	45%
Application of hot or cold	6%	31%	50%

Note: Based on the 2006 Listening to Mothers II Survey Report of 1,573 women delivering singletons.

Source: Ms. Bishop

DRUGS, PREGNANCY, AND LACTATION

More Safety Data on SSRIs

Over the last 5 years, several studies analyzing the reproductive safety of the selective serotonin reuptake inhibitors (SSRIs), individually and as a group, have been published in the United States and elsewhere. Earlier studies that failed to show an association between first-trimester exposure to SSRIs and an overall increased risk of major congenital malformations were typically small cohort studies; subsequent meta-analyses of the available cohort studies have also failed to show an increased risk, which has been reassuring.

The cohort study, which prospectively follows both exposed and unexposed people longitudinally, is the gold standard for evaluating the teratogenic potential of drugs. However, such a study is limited by the difficulty in enrolling enough exposed subjects to demonstrate a statistically significant difference between the two groups (which is particularly true for relatively rare outcomes that can easily be missed).

Recently, several large case-control studies have been published that questioned the safety of SSRIs with respect to teratogenic risk. Case-control studies identify cases of an outcome of interest, such as a certain birth defect, and analyze case and control groups of patients to determine if an association exists between various exposures and the outcome. Such studies have included an analysis of records from a large managed care organization, which found an increased risk of heart defects in the babies of women who were prescribed paroxetine (Paxil) during pregnancy, compared with the babies of women prescribed other antidepressants during pregnancy. Another study, using data from the Swedish Medical Birth Registry, also found an increased risk of cardiac defects among infants with first-trimester exposure to paroxetine.

Two large case-control studies published in June represent the latest efforts to use large multicenter birth defect surveillance programs to refine our understanding of the reproductive safety of SSRIs. Based on their size, these studies might be expected to refine the risk estimate for congenital malformations following fetal exposure to SSRIs, but these investigations produced some divergent results.

The National Birth Defects Prevention Study compared 9,622 infants with birth defects with 4,092 control infants born in the United States from 1997 to 2003 and found no significant association between use of any SSRI from 1 month before to 3 months after conception and congenital heart defects or most other birth defects analyzed.

There was, however, a significantly increased risk for anencephaly (odds ra-

tio 2.4), craniosynostosis (OR 2.5), and omphalocele (OR 2.8) associated with SSRI use in early pregnancy; these are birth defects that have not been associated with in utero exposure to SSRIs in previous studies. The relationship was particularly strong with paroxetine (N. Engl. J. Med. 2007;356:2684-92).

But no associations were identified between maternal SSRI use in early pregnancy and these three anomalies or congenital heart defects overall in the accompanying case-control study of 9,849 infants with birth defects and 5,860 infants with no birth defects enrolled in the Slone Epidemiology Center Birth Defects Study, at Boston University (N. Engl. J. Med. 2007;356:2675-83). However, there was a significant association

between the use of sertraline (Zoloft) specifically and both omphalocele (odds ratio 5.7) and septal defects (2.0). There was also a significant association between paroxetine exposure and right-ventricular outflow tract obstruction defects (odds ratio of 3.3). It should be noted that the number of actual exposures in these studies to a specific SSRI

was particularly small, fewer than 10 actual reported exposures.

Despite the divergent findings, both studies suggest that the absolute risk of overall major congenital malformations or even particularly rare malformations is extremely small, as pointed out by the respective authors and the accompanying editorial (N. Engl. J. Med. 2007;356:2732-33). For example, the Slone study authors point out that the estimated prevalence of right-ventricular outflow tract obstruction defects is about 5.5 cases per 10,000 live births, so the risk of this defect would be only 0.2% if an SSRI increased the risk fourfold. It also has been noted that in such studies the search for numerous outcomes associated with potentially numerous exposures may result in a finding by chance.

Physicians and patients deciding about treatment during pregnancy will need to continue to make decisions on a case-by-case basis, weighing the risks and benefits using the available, incomplete data on the relative risks of exposure to the medicine or to depression, and the patient's wishes.

A critical finding influencing treatment decisions is that untreated depression during pregnancy dramatically increases risk for postpartum psychiatric relapse.

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