

Sphincter Tear Rate Falling in Vaginal Births

BY BETSY BATES
Los Angeles Bureau

TUCSON, ARIZ. — The rate of anal sphincter laceration during vaginal delivery has declined sharply in recent years, paralleling modifications in obstetric practice, a University of Southern California study revealed.

Anal sphincter laceration occurred in 11.2% of vaginal deliveries at the colossal Los Angeles County/USC Medical Center in 1996, compared with 7.9% in 2004, with about a 6% reduction in risk every year after 1996, reported Dr. Steven Minaglia at the annual meeting of the Society of Gynecologic Surgeons.

"Changes in obstetric practice, such as the increase in cesarean section and the decrease in operative delivery and episiotomy, may have contributed to the dramatic reduction in sphincter laceration," Dr. Minaglia said.

During the time period studied, episiotomies declined from 9% to 8% of vaginal deliveries, vacuum deliveries from 5.1% to 2.9%, and forceps deliveries from 1.7% to 0%. "Of note, the C-section rate went from 18.2% to 32.3%," he said.

The retrospective study assessed characteristics in 1,703 patients who had an anal sphincter laceration and 14,964 who did not have such an injury, for a total of 16,667 singleton vaginal deliveries at greater than 20 weeks of gestation. Younger age, lower parity, and higher birth weight all were associated with a higher likelihood of an anal sphincter laceration.

Other important risk factors independently associated with a laceration included vacuum delivery (odds ratio 3.19), forceps delivery (OR 2.79), episiotomy (OR 1.36), shoulder dystocia (OR 2.03), and gestational age (OR 1.03, about a 4% increased risk for each week of gestation).

Dr. Minaglia, of the division of female pelvic medicine and reconstructive surgery, encouraged a further minimization of modifiable risk factors such as episiotomy and operative delivery to minimize long-term harm associated with sphincter laceration.

A second study presented at the meeting found similar risk factors at the University of New Mexico Hospital in Albuquerque, where episiotomy and operative vaginal delivery rates are 5%-25% lower than national rates.

The case-control study matched 350 women who sustained a third- or fourth-degree anal sphincter laceration to 716 women matched by gestational age and chronologic time of delivery who did not have a laceration.

The risk of an anal sphincter laceration increased with vacuum extraction (OR 5.96), forceps extraction (OR 11.05), and episiotomy (OR 2.34); as well as maternal age (OR 1.09 per year); and infant weight (OR 1.09 per 100 g).

As in the USC study, multiparity was protective, reported Dr. Alana Williams and associates in a poster presentation. ■

Cesarean May Not Avert Levator Ani Injury

BY BETSY BATES
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TUCSON, ARIZ. — One woman in four suffers neuropathic injury to the levator ani with her first delivery, according to a novel study that used pre- and postpartum concentric needle electromyographic examinations to study muscle function.

Cesarean sections performed during labor were not protective in the study

conducted by Dr. Alison C. Weidner and her associates at Duke University Medical Center and presented at the annual meeting of the Society of Gynecologic Surgeons.

Initial EMG studies were performed on 58 primiparous women in the early third trimester, providing baseline data on muscle function at four separate sites of the levator ani. A quantitative amplitude analysis provided data on muscle function at rest and during moderate

and maximum voluntary contractions.

Information was collected on the subjects' labor and delivery patterns, and follow-up examinations were performed 6 weeks and 6 months post partum.

The mean age of the subjects was 29 years, and their mean body mass index was 25 kg/m².

Evidence of neuropathic injury was seen in 14 (24%) of 58 subjects at the 6-week examination and 17 (29%) of 58 at the 6-month examination, said Dr. Weid-

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ner, chief of the division of urogynecology at the Durham, N.C., institution.

Some women who demonstrated neuropathic injury at 6 weeks were normal by 6 months, while a few who seemed normal at 6 weeks showed evidence of injury at 6 months.

Dr. Weidner said patterns of muscle recruitment in women who exhibited injury only at 6 months suggest that muscle atrophy takes time, and that the full extent of damage was not clear at the 6-week visit.

"My point is that all of the patients who had this pattern were actually suffering levator injury at the time of delivery,"

although it could not be measured initially, she explained.

A close look at obstetric variables revealed findings that Dr. Weidner called "striking."

For example, the 11 women who underwent a C-section during labor suffered injury rates equivalent to those seen in the 36 women who had spontaneous vaginal deliveries and nearly as high as the 8 who had operative vaginal deliveries.

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Only the three women who had elective C-sections seemed to be spared significant levels of injury, with just one woman

showing injury at one of the four levator ani sites measured at 6 months post partum.

That C-section was not protective in the context

of labor surprised Dr. Weidner, since only 2 of those 11 patients progressed far enough in labor to push.

Another interesting finding was the role

of a prolonged second stage of labor in women who received epidural anesthesia, which has historically been assumed to lead to greater injury to the pelvic floor. In fact, a shorter duration of epidural analgesia during labor and operative vaginal delivery were independently associated with a higher rate of injury in a logistic regression analysis.

A formal discussant of Dr. Weidner's paper, Dr. Michael Aronson of the University of Massachusetts, Worcester, said the study constituted "a very important contribution to the literature" that may shed light on potentially modifiable mechanisms of injury during labor and delivery. ■

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