

Survey of labor epidural analgesia and patient education for women in southwest China

Hui Liu · Jie Zhou · Yuying Tang · Yushan Ma ·
Chuan Xie · Xuemei Lin

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To the Editor:

The overall rate for cesarean delivery (CS) in China is >50 % in many regions, a significant portion of which are for nonmedical reasons [1]. Although practice of labor epidural analgesia (LEA) is no longer limited by resource or technology, its overall rate remains <1 % in mainland China [2]. At West China Second University Hospital of Sichuan University, the largest tertiary center for women and children in southwest China, we surveyed 413 postpartum women, of whom 335 were primiparas (Table 1). Before their delivery, 264 women were aware of pain-relieving techniques, among which only 52 had some knowledge about LEA. Women with college education or

above were 2.5 times as knowledgeable about labor analgesia as women with lower educational backgrounds ($P = 0.015$). Not only were primiparas younger, they were also 1.4 times more knowledgeable about labor-pain-relieving techniques than multiparas ($P = 0.002$).

At admission, 262 (63.4 %) women planned for CS. However, final CS rate of the survey group was 86.2 %, more than half of which were performed per maternal request. Fifty-seven (13.8 %) women achieved vaginal delivery; however, only two women requested LEA and only one actually received it. After delivery, all parturients received a lecture on LEA and were asked if they would prefer LEA for their next delivery. Among primiparas, 79.4 % answered that they were not certain about the safety profile of LEA and/or considered it risky to maternal or fetal well-being. However, 45 % answered that they would prefer LEA for their next labor and delivery. Among multiparas, 22 % answered that they would prefer LEA, although 78 % expressed concerns about the safety. Primiparas were at least 14 times more likely than multiparas to choose LEA ($P < 0.001$).

Our survey demonstrated that for women who were aware of LEA, most of them preferred to use it for the next delivery after the educational session by an anesthesiologist. It is likely that the experience of labor pain motivated them to choose LEA, despite their concerns about its safety and risk of trial of labor after cesarean. These results indicate that public education regarding LEA by knowledgeable personnel is imperative. The average number of antenatal visits for women who participated in our survey exceeded nine, which indicates that obstetricians could play an important role in educating women about labor analgesia. In addition, obstetricians would be equally important in reducing CS for “social” reasons. Nevertheless, in our experience, the practical

H. Liu and J. Zhou contributed equally to this work and should be considered co-first authors.

H. Liu · Y. Tang · Y. Ma · X. Lin (✉)
Department of Anesthesiology, West China Second University
Hospital, Sichuan University, No. 20, Section 3,
South of Renmin Road, Chengdu 610041, Sichuan,
People's Republic of China
e-mail: Xuemeiln@gmail.com

J. Zhou
Department of Anesthesiology, Perioperative and Pain Medicine,
Brigham and Women's Hospital, Harvard Medical School,
75 Francis Street, Boston, MA 02115, USA

C. Xie
Department of Gynaecology and Obstetrics, West China Second
University Hospital, Sichuan University, Chengdu 610041,
Sichuan, People's Republic of China

Table 1 Key survey elements and results

Survey elements	Primiparas (<i>N</i> = 335)	Multiparas (<i>N</i> = 78)
Level of education		
Below high school	45 (13 %)	28 (36 %)
High school or vocational school	24 (7 %)	11 (14 %)
College and above	266 (80 %)	39 (50 %)
Awareness before educational session		
Not aware of any labor-pain-relieving techniques	102 (30 %)	47 (60 %)
Aware of labor-pain-relieving techniques	233 (70 %)	31 (40 %)
Aware of LEA	45	7
Delivery mode at admission		
Vaginal delivery	129 (29 %)	22 (28 %)
Cesarean delivery	206 (71 %)	56 (72 %)
Primary reason for cesarean delivery at admission		
Medical indications	58 (28 %)	34 (61 %)
Nonmedical indications	148 (72 %)	22 (39 %)
Maternal and/or fetal safety concerns	65 (32 %)	13 (23 %)
Fear of labor pain	45 (22 %)	4 (7 %)
Fear for failure in vaginal delivery	23 (11 %)	1 (2 %)
Other	15 (7 %)	4 (7 %)
Actual delivery mode		
Vaginal delivery	42 (13 %)	15 (19 %)
Cesarean delivery	293 (87 %)	63 (81 %)
Primary reason for actual cesarean delivery		
Medical indications	109 (37 %)	44 (70 %)
Nonmedical indications	184 (63 %)	19 (30 %)
Maternal and/or fetal safety concerns	106 (36 %)	13 (20 %)
Fear for labor pain	40 (14 %)	1 (2 %)
Fear of failure in vaginal delivery	23 (8 %)	1 (2 %)
Other	15 (5 %)	4 (6 %)
Would like to receive LEA for next vaginal delivery		
Yes	152 (45 %)	17 (22 %)
No	183 (55 %)	61 (78 %)

LEA labor epidural analgesia

feasibility of LEA in China also needs further consideration. Monitoring the parturients with LEA has become a significant challenge to many hospitals in China because of improper nurse-to-parturient ratio and lack of standards for clinical information system infrastructure and reimbursement mechanism [3]. There is significant patient safety hazard and lack of a general sense of patient safety in many hospitals around China [4]. Our results imply that preferable governmental regulatory adaptation is necessary to facilitate the potential increase in demand for LEA in China.

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