International Journal of Obstetric Anesthesia (2008) **17**, 112–117

ELSEVIER

International Journal of Obstetric Anesthesia

ORIGINAL ARTICLE

Maternal expectations and birth-related experiences: a survey of pregnant women of mixed parity from Calcutta, India

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KEYWORDS
Maternal expectation; Labor pain; Epidural analgesia; Cesarean section; Ethnicity

Accepted October 2007

ABSTRACT
Background: In India, as in other parts of the world with high birthrates, there is an imbalance between maternal expectations and provision of labor pain services. Maternal experience may have an impact on attitudes toward the mode of future deliveries and on cesarean section rates. Maternal expectations regarding labor and delivery, and attitudes towards cesarean section were assessed in women of mixed parity during an antenatal visit at a charitable non-governmental hospital in Calcutta.
Methods: Structured interviews based on a questionnaire were conducted with 205 women.
Results: The majority of the 205 women were nulliparous (71%); the average previous cesarean section rate among the parous minority (29%) was 38.8%. Expectation of labor pain was very common. In the absence of an idea of its severity (78%), a majority were ready to tolerate it as a natural phenomenon (71%). For most interviewees, information about epidural labor analgesia was new (97%), although they were prepared to ask for effective pain relief (98%) and pay for epidural analgesia, if available (95%). Nearly a quarter (24%) of subjects considered cesarean section as an option to avoid labor pain, while most (99%) perceived cesarean section to be safer for the baby than vaginal delivery.
Conclusions: This study indicates that information on what to expect during labor and delivery, the potential role of epidural labor analgesia, and the impact of cesarean section on neonatal outcome should be the focus of services instituted to improve antenatal and perinatal care.

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0959-289X/$ - see front matter
doi:10.1016/j.ijoa.2007.10.004

Introduction

Despite a trend toward lower annual birthrates,[1] India's population continues to grow rapidly as a result of a better allocation of resources and greater accessibility of community-based health care services in general and obstetric services in particular.[2] Modern-day peripartum maternity care includes epidural labor analgesia as a highly effective option. In many developing countries with high birthrates, however, the epidural analgesia service cannot satisfy actual demand. As a consequence, the discrepancy between maternal hopes and individual birth experiences may affect maternal attitudes towards mode of delivery and thus contribute to a rising proportion of cesarean sections at maternal request. In India mean cesarean section rates of 25% (range 9-54) were found in 30 teaching hospitals across the country in 1998-99[3] and 47% (95% CI 41-52) in private hospitals in Madras in 1997-99.[4] In the authors' institution, the Behala Balananda Brahmachari Hospital and Research Center (BBBHRC) of Calcutta, the cesarean section rate approached 50% in 2001. Obviously, these figures exceed the range of 10-15% defined by the World Health Organization (WHO) as the benchmark above which evidence for a better neonatal outcome is lacking.[5]

The aim of this study was to assess maternal expectations regarding labor and delivery, and attitudes towards vaginal delivery as opposed to cesarean section, in a consecutive sample of nulliparous and parous women during an antenatal visit at a charitable non-governmental hospital in Calcutta, India. We were particularly interested in determining to what level maternal information and previous birth experience were instrumental in asking for epidural analgesia rather than opting for a cesarean section on request.

Methods

In 2002 the Department of Anesthesia of the University Hospital Basel and the BBBHRC in Calcutta started a joint project aimed at improving obstetric care for vaginal delivery by introducing a labor epidural service and by promoting comprehensive antenatal education. With approval by the Board of Directors of the BBBHRC, the current study was performed as a preliminary step to establish the actual state of knowledge, beliefs, and expectations regarding labor and delivery, and attitudes towards vaginal delivery as opposed to cesarean section. There were no exclusion criteria and strict confidentiality and lack of impact on obstetric care were guaranteed. After giving written informed consent, 205 (90%) of 227 consecutive women attending an antenatal clinic at the BBBHRC completed an interview based on a structured questionnaire. This interview was evaluated and minor adaptations were made following a pilot study involving 17 pregnant women.

All women were interviewed by the same multilingual female medical investigator (RMKM) who completed the questionnaires. Participants were asked to indicate whether they agreed with a number of statements by using a five-point-scale in order to determine the level of agreement indicated by scores ranging from 1 (strong agreement) to 5 (strong disagreement); they were also invited to give their opinion or suggestions regarding specific items of perinatal care. Questions on epidural labor analgesia were asked only after full explanation of the procedure. For the purposes of the study, the question of cost was not considered an issue. Socioeconomic status was assessed by surrogate questions (ownership of selected items, such as television or telephone), giving insight into monthly income. There was no follow-up interview.

Statistical methods

Using descriptive statistics, factors that correlated with experiences and expectations of delivery were determined and, where appropriate, divided into subgroups. These factors were analyzed with the StatView 5 program (SAS Institute Inc., Cary, North Carolina) using an analysis of variance for normally distributed numeric data, a Mann-Whitney U test for data that were not normally distributed, and a χ^2 test or a Fisher's exact test for categorical data. Odds ratios and 95% confidence intervals were calculated using Epi Info Version 6.0 Software (COC, Atlanta). A P value of <0.05 was considered significant.

Results

Participants

The subjects participating in this study included 146 nulliparous and 59 parous women. The interviews took place from January to August 2002 during the first (28%) or a subsequent antenatal check-up (72%). Demographic and socioeconomic details are listed in Tables 1 and 2. Data were collected for almost a year, because of the low delivery rate at the BBBHRC (about 500 per year), and because all interviews were conducted by the same trilingual