Sexual & Reproductive Healthcare 3 (2012) 61–65

Contents lists available at SciVerse ScienceDirect

Sexual & Reproductive Healthcare

journal homepage: www.srhcjournal.org

Women's experiences after early versus postponed oxytocin treatment of slow progress in first childbirth – a randomized controlled trial

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ARTICLE INFO

Article history:
Received 12 October 2011
Revised 9 February 2012
Accepted 8 March 2012

Keywords:
Childbirth experience
Prolonged labour
Oxytocin augmentation
Randomized controlled trial

ABSTRACT

Objective: The aim was to compare the childbirth experiences of primiparous women with slow labour progress who had received early versus postponed oxytocin augmentation.
Methods: The population included healthy primiparous women with slow labour progress after a normal pregnancy and spontaneous onset of active labour at term who had taken part in a randomized controlled trial at two delivery units in Sweden comparing early versus postponed oxytocin augmentation. A total of 536 women were sent the Childbirth Experience Questionnaire (CEQ) one month postpartum. The 22-item questionnaire assesses four domains of the childbirth experience. Main outcomes were the four domains of the CEQ: Own capacity, Professional support, Perceived safety and Participation.
Results: There were no significant differences between the women in the early and expectant oxytocin treatment groups in any of the four domains; however, operative births were associated with significantly worse childbirth experiences. Almost every third woman in both groups had negative and depressing memories from the childbirth process.
Conclusions: Early oxytocin augmentation for slow labour progress does not appear to be more beneficial than expectant management regarding women's perceptions of childbirth one month postpartum. Given the risks for the foetus associated with oxytocin treatment, prudent expectant management seems to be a safe and viable alternative.

Introduction

Women's experiences of childbirth are affected by their perceptions of support and care from relatives and midwives, sense of control, sense of security and involvement in decision-making during labour [1–3]. Endurable labour pain and access to analgesia during childbirth are also important factors. However, effective pain relief is not always related to satisfaction nor is a high level of pain always related to dissatisfaction. In retrospective accounts of labour pain, most of the women report that their pain was manageable, whereas for others the pain experience was associated with a loss of control and psychological trauma [4]. Unplanned medical interventions during childbirth, such as oxytocin augmentation for slow progress, emergency caesarean, operative vaginal births and other adverse maternal and neonatal outcomes are related to a poor experience [5,6]. After childbirth some women experience traumatic stress symptoms with distressing memories and intense fear of future pregnancies and births [7–9]. This sometimes results in the mothers requesting elective caesarean delivery in next pregnancy [10,11].

Slow labour progress is common in nulliparous women [12] and is associated with a negative birth experience [13]. The most common treatment for arrested or slow labour progress is oxytocin augmentation. Early oxytocin treatment of slow labour progress reduces labour duration compared to expectant management, without effect on the spontaneous vaginal delivery rate [14]. Earlier research regarding maternal satisfaction in randomized controlled trials of active versus expectant oxytocin management is inconclusive. Some studies have shown that early treatment of slow labour was preferred by the women [15,16] but more recent studies conclude that there are no differences in maternal satisfaction between groups receiving early versus expectant treatment with oxytocin [17,18].

More research is needed to gain a better understanding of women's experiences of different treatments for slow labour

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http://dx.doi.org/10.1016/j.srhc.2012.03.003

progress. Our aim was to compare the childbirth experiences of primiparous women who had received early oxytocin augmentation versus expectant management for slow labour progress.

Methods

This randomized controlled study was conducted in two delivery wards in the south–west of Sweden, Sahlgrenska University Hospital and Ryhov county Hospital. Data collection took place between November 1998 and January 2004. Healthy nulliparous women received information in the third trimester at their antenatal clinics. At the delivery unit all participating women were given oral and written information and gave their informed consent. Inclusion criteria were nulliparity, a singleton foetus in cephalic presentation, an uncomplicated pregnancy, a spontaneous onset of active labour with regular contractions and an effaced cervix dilated between four and nine centimetres, at a gestational age between 37 + 0 and 41 + 6 weeks, and slow progress in the first stage of active labour. Slow progress was defined as an arrest in cervical dilatation for 2 h or a dilatation less than 1 cm for 3 h in the first stage of active labour. If labour progress was slow and membranes were intact, amniotomy was performed. If there was still no progress 1 h after amniotomy, the woman was randomly allocated to one of two approaches to oxytocin augmentation: oxytocin administered within 20 min (Early oxytocin group) versus oxytocin augmentation postponed for another 3 h (Expectant group). Both groups had the same access to labour analgesia and midwifery support. The allocation envelopes were opaque, sealed, serially numbered and placed in another unit of the department. Details on the study design are reported elsewhere [19].

In a follow-up 1 month postpartum a total of 536 women (Early oxytocin group $n = 284$, Expectant group $n = 252$) were sent the Childbirth Experience Questionnaire (CEQ) [20]. The questionnaire comprises 22 items aggregated to four domains: *Own capacity* (8 items regarding sense of control, personal feelings during childbirth and labour pain), *Professional support* (5 items about information and midwifery care), *Perceived safety* (6 items regarding sense of security and memories from the childbirth), and *Participation* (3 items regarding own possibilities to influence the birthing situation), Table 1. Most items are rated on a 4-point Likert scale ranging from 1 (Totally disagree), 2 (Mostly disagree), 3 (Mostly agree) to 4 (Totally agree). Memory of labour pain, sense of security and control are rated on a 0–100 visual analogue scale (VAS). The VAS scores are categorized such that 0–40 = 1, 41–60 = 2, 61–80 = 3 and 81–100 = 4. Scores for negatively worded items and the pain item are reversed so that higher scores reflect more positive experiences. Mean scale scores are computed with the half-scale method [21].

The Mann–Whitney U-test was used for comparison of continuous variables. Proportions of events were compared with χ^2 or the Fisher's exact test. Cronbach's alpha was used to assess the internal consistency reliability of the CEQ subscales. The analyses were performed with SPSS 18.0 for Windows (SPSS Inc., Chicago, ILL, USA). All significance tests were two-tailed and conducted at the 5% significance level.

Ethical approval

The study was approved by the Regional Ethics Board in Gothenburg, Sweden in November 1997 (L586-97).

Results

Of the 536 women who were sent the questionnaire, 442 (82% response rate) returned evaluable questionnaires (Early oxytocin group $n = 233$, 82%; Expectant group $n = 209$, 82.9%), see Fig. 1. Cronbach's alpha coefficients for the four subscales were compatible with those reported in the CEQ validation study [20], i.e. Own capacity: $\alpha = 0.81$ versus 0.82; Professional support: $\alpha = 0.89$ versus 0.88; Perceived safety: $\alpha = 0.72$ versus 0.78; Participation: $\alpha = 0.64$ versus 0.62. There were no differences between the Early oxytocin and Expectant groups regarding maternal age, gestational age, neonatal birth weight, mode of delivery, Apgar scores or number of transferrals to neonatal intensive care unit (Table 2).

As shown in Table 3, there were no significant differences between the early oxytocin and expectant groups in any of the four assessed childbirth domains. Instead, significant differences were found within each group between women with spontaneous vaginal births versus operative birth, where the former had significantly higher mean scores in the domains *Own capacity* and

Table 1
Dimensions and included items.

Own capacity
Labour and birth went as I had expected
I felt strong during labour and birth
I felt capable during labour and birth
I was tired during labour and birth
I felt happy during labour and birth
I felt that I handled the situation well
As a whole, how painful did you feel childbirth was? (VAS)
As a whole, how much control did you feel you had during childbirth? (VAS)
Professional support
My midwife devoted enough time to me
My midwife devoted enough time to my partner
My midwife kept me informed about what was happening during labour and birth
My midwife understood my needs
I felt very well cared for by my midwife
Perceived safety
I felt scared during labour and birth
I have many positive memories from childbirth
I have many negative memories from childbirth
Some of my memories from childbirth make me feel depressed
My impression of the teams medical skills made me feel secure
As a whole, how secure did you feel during childbirth? (VAS)
Participation
I felt I could have a say whether I could be up and about or lie down
I felt I could have a say in deciding my birthing position
I felt I could have a say in the choice of pain relief

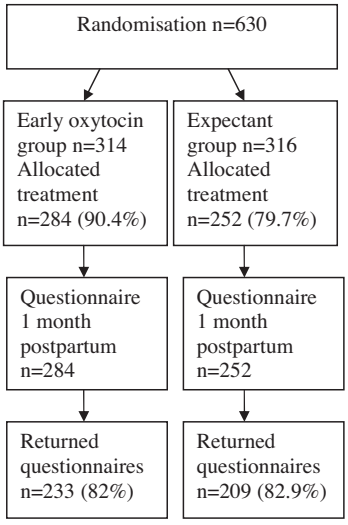

Fig. 1. Flowchart of participants.