Sexual & Reproductive Healthcare 4 (2013) 3–8

Contents lists available at SciVerse ScienceDirect

Sexual & Reproductive Healthcare

journal homepage: www.srhcjournal.org

Parents' experiences of an instrumental vaginal birth findings from a regional survey in Sweden

Ingegerd Hildingsson [a,b,c,*], Annika Karlström [b], Astrid Nystedt [b]

[a] Uppsala University, Department of Women's and Children's Health, Uppsala, Sweden
[b] Mid Sweden University, Department of Health Science, Sundsvall, Sweden
[c] Karolinska Institutet, Department of Women's and Children's Health, Stockholm, Sweden

ARTICLE INFO

Article history:
Received 26 September 2012
Revised 2 December 2012
Accepted 10 December 2012

Keywords:
Instrumental vaginal birth
Parents' birth experiences
Birth outcome

ABSTRACT

Objective: An instrumental vaginal birth is known to affect women's birth experience, few studies have explored the fathers' experiences of attending such a birth. The aim of this study is to compare birth outcome and parents' feelings in parents with instrumental vaginal birth or a spontaneous vaginal birth.
Methods: A regional survey was conducted of 936 mothers and 827 fathers recruited in mid-pregnancy and followed up 2 months after birth. Data was collected by questionnaires. Crude and adjusted odds ratios with a 95% confidence interval were used in the analysis.
Results: The prevalence for instrumental vaginal birth was 9%. Prolonged labour (OR 8.3; 95% CI 5.0–13.9), augmentation with synthetic oxytocin (OR 5.1; 2.9–8.9), and birth complications (OR 2.5; 1.5–2.6) were more common in the instrumental vaginal group. An instrumental vaginal birth was associated with a negative birth experience for mothers (OR 3.2; 1.3–8.1) and fathers (OR 5.2; 1.2–21.5). Mothers who had an instrumental vaginal birth were more likely to report feelings that the baby would be damaged during birth (OR 3.0; 1.7–5.5) and that the birth experience made them decide not to have any more children (OR 3.4; 1.1–10.7). Fathers reported a near-panic feeling when attending an instrumental vaginal birth (OR 5.2; 1.7–15.5).
Conclusion: An instrumental vaginal birth was correlated with longer and more complicated births, epidurals and oxytocin augmentation. It affected the birth outcome and parents' feelings and was associated with future reproductive thoughts and a negative birth experience.

Introduction

Instrumental vaginal birth is an intervention affecting 10–25% of all primiparous women in high-income countries [1]. In the most recent Swedish birth statistics in 2009 instrumental vaginal births accounted for 8% of all births with regional variations between 4.4–13.3% [2]. These births have been associated with negative birth outcomes [1–4] as well as negative birth experiences [5]. The term *instrumental vaginal birth* usually refers to births conducted using forceps or vacuum extraction [3].

Instrumental vaginal births are usually performed as a result of fetal distress or prolonged labour with weak contractions, causing the mother to become exhausted [1,4]. Instrumental vaginal births are associated with increased maternal and fetal morbidity [6–8]. Epidural anesthesia has been associated with this type of birth. A recent study from the US showed a relative risk ratio of 2.5 for instrumental vaginal births in primiparous women given epidural and a risk ratio of 5.9 [9] for multiparas women.

Adverse maternal outcomes associated with instrumental vaginal births include perineal trauma such as sphincter ruptures and episiotomies, bleeding complications, urinary incontinence, dyspareunia and perineal pain [4,10–12]. For the baby, severe conditions such as intracranial bleeding, plexus brachialis injuries and facial palsy occur more frequently after an instrumental vaginal birth [7,13].

A birth that ends with a vacuum or forceps can negatively affect a women's birth experience. In a national Swedish cohort study the risk for a negative birth experience still present after 1 year was fourfold for those having had an instrumental vaginal birth [5]. Studies reporting fathers' experiences of an instrumental vaginal birth are rare. Chan and Paterson-Brown [14] reported that fathers experienced greater trauma in an instrumental vaginal birth as compared to a normal vaginal birth, and similar findings were reported by Johansson et al. [15]. In recent years the role of the father has changed, and contemporary fathers in Sweden are strongly encouraged to become active participants during antenatal care, labour and birth and share the parental leave with the mother

* Corresponding author. Address: Mid Sweden University, Department of Health Science, Holmgatan 10, 85170 Sundsvall, Sweden. Tel.: +46 762 777554.
E-mail address: ingegerd.hildingsson@miun.se (I. Hildingsson).

1877-5756/$ - see front matter © 2012 Published by Elsevier B.V.
http://dx.doi.org/10.1016/j.srhc.2012.12.002

[16]. Men's involvement in childbearing activities has been recognised as important for their partner, their children and for themselves [17]. It is therefore important to study both parents' birth experiences.

Aim

The aim of this study is to compare birth outcome and parents' feelings in parents with instrumental vaginal birth or a spontaneous vaginal birth.

Methods

Design

This study is one part of a prospective longitudinal cohort study including women and men in a northern region of Sweden who were invited to participate during the entire year of 2007. Previous papers from this project have been reported, e.g. childbirth thoughts in mid pregnancy [18], fathers experiences of birth [15,16], health issues [19] and mothers experiences of birth [20]. Details of the recruitment process is presented in detail elsewhere [18].

Setting and context

The region under study is situated in the middle-north part of Sweden. This area includes three hospitals; one is a referral hospital with approximately1600 births annually, and the other two are smaller hospitals with around 300–500 births. In all of the hospitals midwives are the primary caregivers for women with normal pregnancies, and they work in collaboration with obstetricians if problems occur. Postnatal stay is 2 days on an average, and healthy mothers are encouraged to go on early discharge. The recruitment took place at the ultrasound wards at the three hospitals. All women are offered a routine ultrasound screening examination in pregnancy week 17–19 and the attendance rate is high (98%). The majority of fathers also attend the examination. Two weeks prior to the ultrasound examination a letter of invitation was sent to the women's home address and both parents were invited to participate. In order to participate it was necessary to understand the Swedish language. Only parents with a normal ultrasound examination, e.g. non-malformed fetuses, were approved by the midwife in charge of the examination.

Data was collected from a total of four questionnaires: the first during mid-pregnancy (week 17–19), the next in late pregnancy (week 32–34), the third, 2 months after birth, and the last questionnaire was given 1 year after birth. During the follow-up process a decisions was made to only send the questionnaire 2 months after birth to parents who had completed the first and/or the second questionnaire during pregnancy. For this study we used the questionnaire which was given 2 months after birth together with socio-demographic background data collected in mid-pregnancy. We also checked the correctness of the reported data and the diagnosis made with women's birth records. Questions about birth such as perceived pregnancy and birth complications, onset of labour, mode of delivery, length and experience of labour, and pain relief, have previously been used in a national Swedish survey [5]. Length of labour was assessed in hours. Pain intensity was assessed on a 7-point scale with the anchors "No pain at all = 1" and "Worst pain imaginable = 7". The experience of pain was measured on a similar scale with the anchors "Very negative = 1" and "Very positive = 7". A 5-point Likert scale measuring feelings during labour and birth was used. This scale has been previously used in a regional Swedish study [21]. One example of the statements were worded "It was exciting to give birth" assessed from 'Strongly to 'Strongly disagree' but were dichotomized into "strongly agree" versus the other measures, due to the skewed nature of the answers. The questions were sometimes slightly reworded to fit the fathers' experiences. The scale has so far not undergone any psychometric evaluation, the analysis were performed on item level.

Analysis

The analyses were conducted using IBM® SPSS® software version 20.0. Descriptive statistics were applied for presenting the study sample. To study differences between instrumental vaginal births and spontaneous vaginal births crude and adjusted odds ratios with a 95% confidence interval were used [22]. Adjustments on each variable were made based on differences in background characteristics and confounding factors, using the binary logistic regression technique. The study was approved by the regional ethics committee at Umeå University (Ref. No 2006: 134-Ö).

Results

The study sample consisted of 936/1242 (75%) mothers and 827/1112 (74%) fathers. They correspond to 62.5% of those who originally consented to participate in the longitudinal survey. Information about their socio-demographic background is shown in Table 1. The majority were aged between 25–35 years, cohabiting and of Swedish origin. Women were in general more highly educated than men, and slightly under half of the sample was expecting their first baby. Use of tobacco was higher in men than in women.

In total 684 (73.1%) had a normal vaginal birth, 84 (9%) an instrumental vaginal, 64 (6.8%) an elective caesarean section and 104 (11.1%) an emergency caesarean section. Hereafter, this paper will focus on normal vaginal births and instrumental vaginal births only.

Table 1
Socio-demographic background.

	Women *n* = 936 *n* (%)	Men *n* = 827 *n* (%)
Age		
<25	113 (12.1)	37 (4.6)
25–35	651 (69.8)	521 (64.6)
>35	168 (18.0)	248 (30.8)
Mean	30.04	32.37
Civil status		
Married or cohabiting	905 (97.1)	795 (98.3)
Other family situation	27 (2.9)	14 (1.8)
Country of birth		
Sweden	887 (95.2)	777 (96.8)
Other country	45 (4.8)	26 (3.2)
Educational level		
Elementary school/High school	411(44.7)	485 (60.3)
University education	509 (55.3)	319 (39.7)
Parity		
Primiparas	420 (45.1)	390 (47.2)
Multiparas	512 (54.9)	427 (52.8)
Tobacco habits		
Smoking or snuffing	54 (5.8)	282 (34.1)
Not smoking or snuffing	878 (94.2)	545 (65.9)

Categories may not sum up to the total number owing missing data. Percentages calculated are based on respondent number in each category from whom data were reported.