TITLE:

The Length of the Active Phase of the Second Stage of Labour in Women Giving Birth in Greenland Compared to Denmark: a pilot study

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ABSTRACT
Objective: Midwives in Greenland observe that people give birth faster, with fewer complications tentatively due to early maternal expulsive efforts in second stage. Our aim was to quantify these observations and potential geographical differences.
Design: Bicentre observational prospective cohort study.
Method: Between October and December 2020, 50 participants in labour in Aabenraa (Denmark) and Nuuk (Greenland) participated. Transperineal head-perineum distance was measured with a handheld ultrasound scanner. Negative binomial regression was used to calculate incidence rate ratio. Fetomaternal outcome was recorded and compared
Results: The median duration of maternal expulsive efforts was 23 minutes in Denmark compared to 10 minutes in Greenland (p=0.046). This was adjusted for parity, epidural use and gestational age. In Denmark 22 % and in Greenland 81 % started maternal expulsive efforts before the fetal head was at the pelvic floor (p-value< 0.001).
Conclusion: Although the duration of maternal expulsive efforts and head-perineum distance was significantly different in the univariate analysis, in the multivariate analysis this was not affected by ethnicity. There was no significant difference in bleeding, perineal tears, or Apgar scores. There is a tendency of a shorter duration of maternal expulsive efforts in the active phase of the second stage of labour distance in Greenland compared to practice in Denmark. However, it seems that epidural and parity could be the main confounders to explain the difference between the two groups, but this needs further investigation.

Keywords: Birth, Cervical dilation, Delivery time, Head perineum distance, Labour complication, Ultrasound.

Abbreviations: biparietal diameter (BPD), caesarean section (CS), cardiotocogratphy (CTG), estimated date of delivery (EDD), induced labour (IOL, maternal expulsive efforts (MEE), postpartum haemorrhage (PPH).

INTRODUCTION

The duration of the three stages of labour depends on many variables, such as parity, fetal size, pelvic anthropometry, choice of analgesia, the mode of onset of labour, whether spontaneous or induced labour (IOL) [1]. Normal practice in most high-income countries, the attendant midwives instruct intrapartum participants how and when to push correctly using maternal expulsive efforts (MEE) [2, 3, 4]. Accordingly, the onset and duration of the second stage of labour is an imprecise science but is defined as the period from full dilatation of the cervix until the baby is born [5]. During this period the participants may have an involuntary urge to bear down, because of expulsive uterine contractions. Since the introduction of epidural analgesia to obstetric practice, this feeling at full dilatation of the cervix may not be present. A period of time may be permitted for the head to descend further into the pelvis, and the urge to bear down develops, referred to as the passive phase of the second stage of labour. In Greenland, midwives provide anecdotal evidence of local participants having a shorter second stage of labour, associated with initiation of MEE before the fetal head descends to the pelvic floor. The practice of initiating MEE at full dilation aims to reduce maternal exhaustion and prevent maternal morbidity such as caesarean section (CS) and severe perineal tears [5]. Other studies have proposed that early MEE could be a physiological variation in labour if maternal and fetal conditions are reassuring [6].

Midwives and obstetricians in Greenland have observed fewer complications like tears and instrumental delivery, but more postpartum haemorrhage (PPH), though the reasons for this remain unknown. While Danish labour ward practices are like other high-income countries, Inuit culture in Greenland is closely tied to traditions and belief, with home births assisted by locals. Inuit participants play an active role in their own birth experience and are encouraged to follow their own body's physiological cues with respect to MEE and rest [2, 7]. Despite the growing evidence that labour norms, as described by Friedman [8], may not fit many current obstetric populations, the standard curve of progression is still used widely to guide labour interventions. Some studies have attempted to analyse the length of the first and second stages of labour, with respect to ethnicity without the use of additional ultrasound [1, 3, 9, 10], If this was studied further, it could indicate more population standardised references for labour and delivery.

In this pilot study, portable transperineal ultrasound scan, digital examination, and participants data, were used to examine whether early MEE, defined as being before the fetal head has rotated at the pelvic floor, has neonatal and maternal benefits. The primary outcome of the study was to investigate the rate of vaginal birth compared to CS and total time from the start of MEE to delivery. As a secondary outcome, head to perineum distance was measured at the start of MEE. The tertiary outcomes explored the use of oxytocin, PPH, perineal tears, Apgar scores and the need for operative instrumental delivery.

MATERIAL AND METHODS

Setting

We performed a bicentric observational prospective cohort study in Denmark and Greenland. Denmark and Greenland differ, with respect to socioeconomics, climate, landscape, and culture. Greenland became partly independent from Denmark in 1953 [11], maintaining strong links and following Danish guidelines with respect to health care provision. The only obstetric department in Greenland is in the capital Nuuk, to where complicated pregnancies are referred. Most of the population in Greenland is of Inuit Greenlandic ancestry [12] and is still regarded as a natural process with as little intervention as possible following an uncomplicated pregnancy. The idea of being truly Inuit involves being born in their own land and community [13]. During recent decades, the birth rate in Greenland has remained ~2.1 births per participants, [12] compared to ~1.8 in Denmark [14] (2017 figures). A major Health

Reform was launched in Greenland in 2000, due to high perinatal mortality and morbidity [13, 15, 16]. The reform included training programmes for healthcare workers in perinatal care and basic ultrasound scanning for calculating the estimated date of delivery (EDD). In Greenland, only one ultrasound measurement is used due to the distances involved. Since the EDD based on the last menstrual period [17], is uncertain in 10-30% of pregnancies, ultrasound measurement of the biparietal diameter (BPD) around 16-weeks' gestation, is now used to calculate the EDD [17]. If there is >7-day discrepancy between the menstrual dates and the ultrasound estimate, the ultrasound EDD will be used. In Denmark, participants are offered two ultrasound measurements, and the EDD is set around 11-13 gestational weeks using crown-rump length measurements. [18].

Population and inclusion criteria

The participants in this pilot study gave birth at Sønderjylland Hospital, Aabenraa in Denmark, or at Queen Ingrid's hospital, Nuuk, in Greenland during the period of October-December 2020. The goal was to reach a minimum of 25-30 participants in each group. The participants provided verbal and written consent following admission to the labour ward. The two principal authors (C.O and M.Å) performed the scans in Aabenraa, and two trained midwives in Nuuk (V.B and L.P). The inclusion criteria were singleton pregnancies with cephalic presentation, mothers ≥18 years, at 36 completed weeks of gestation and a birth weight ≥3000g. In Nuuk, the birth weight criterion was lowered to ≥2500g due to the low number of births during the study period (Figure 1).

Ultrasound measurement

Intrapartum ultrasound was used to obtain an objective, quantifiable measurement of the distance between perineum and the fetal head. Similar methods have been used in other studies, which demonstrate that ultrasound assessment of the fetal head descent can predict the likelihood of vaginal birth and the duration of labour [19, 20]. Both groups in the study used the same type of portable ultrasound machine (Voloson GE Vscan). The phased array transducer was used due to the tissue depth measured in obstetrics. Due to the small size of the probe, the scanning had to be changed from traditionally translabial to transperineal head-perineum distance (Figure 2). The final images were recorded and sent to midwifery sonographers in Nuuk to maintain reproducibility. During data collection, one of the sonographers was available on the labour ward during weekdays. Vaginal examination was performed by the supervisory midwife, who measured dilatation of the cervix and the position of the fetal head with respect to the maternal ischial spines. The position of the fetal head was recorded as -3 to +3 cm, where the ischial spines corresponded to a level of 0, and where the pelvic muscular floor was defined as +2 and +3. The scanning was performed immediately before initiating MEE. The ultrasound, "depth" was set to 6-10 cm depending on the position of the fetal head, and the "gain" was set as high as possible to best demonstrate bone tissue. Ideally, three measurements were recorded. Pressure was put on the probe and angled to find the shortest head-perineal-distance ultrasonographically. The active phase of the second stage was calculated from the start of MEE to delivery. After all the measurements were performed in both groups, the two first authors (C.O and M.Å) jointly measured the head-perineal-distance in every image (Figure 3) and evaluated the quality and reliability of each image. The best three images were selected for each participant to calculate the average head-perineal-distance, to be used in the further analysis.

Statistical analysis

All analyses were conducted in STATA IC version 16.0.797. A p-value of <0.05 was considered statistically significant. Descriptive statistics was used to analyse the background information, factors during birth and outcome (Tables 1-3). For categorical variables, Chi-square test or Fishers exact test, based on Cochran's rule was used. For non-categorical variables, Wilcoxon sign test or t-test was used, depending on the data distribution. A normal

distribution was evaluated visually using quantile plots. For comparison of MEE between the groups, the incident rate ratio (IRR) with a 95 % confidence interval (CI) was calculated using a negative binomial regression. This method was used because it better considers confounding variables. Model control was used to assess the normal distribution of the deviant residuals. To evaluate ultrasound measurement compared with position of the fetal head from the different study countries, a hierarchical mixed effect model was used, to adjust for repeated measurements between the different groups of scanners in the two countries (Figure 5).

Ethical considerations

The Science Ethics Committees for the Region of Southern Denmark decided that the study was not notifiable to the Scientific Ethics Committee, since there was no use of biological material (1), and the Greenlandic Health Service approved the project. All participants received written information about the project and what data was being collected. This recorded that anonymous data was to be stored for the project for up to 2-years. Personal identification was anonymized, and participant numbers were given in random order by a random number generator.

RESULTS

In total, 96 participants (63 in Denmark and 33 in Greenland) delivered during the study period. After exclusions, 50 participants were included. Of these, 40 participants had satisfactory ultrasound pictures (Figure 1). The univariate analyses and basic characteristics of the participants are shown in (Tables 1-3). In Greenland the gestational age at birth occurred around 1 week earlier than Danish participants. They also had a higher pregestational BMI and were more frequently smokers. Parity was higher among Inuit participants, but their age was similar.

There was a >2-fold increased use of cardiotocogratphy (CTG) in Denmark compared to Greenland (Table 2). In Denmark 41% had an epidural analgesia and none in Greenland. The use of oxytocin and IOL did not differ between the populations. The number of participants with fully cervical dilation at MEE, were equal in both groups (81%). Although, there was a difference between the two groups, 81% of Inuit participants pushed before the fetal head reached pelvic floor compared to only 22% in Denmark (Table 2). When using univariate analysis of transperineal head-perineum distance, participants in Denmark had significantly shorter transperineal head-perineum distance compared to Greenland. No statistically significant difference was found in transperineal head-perineum distance between Inuit and Danish participants using a Hierarchical mixed effect model, adjusted for parity, whether the fetal head was at the pelvic floor and gestational age.

Delivery outcomes are listed in Table 3. The time of MEE in minutes was shorter in Greenland (median interquartile range [IQR] = 10 (6, 26), than in Denmark 23 (12, 41) (p-value 0.046). Figure 4 illustrates the percentage of participants in Greenland, compared to Denmark who delivered with and without epidural. Adjusting for parity, epidural and gestational age, no significant difference was found between MEE in ethnicity between the two groups (IRR =1.64; 95 % CI= (0.88, 3.06); p-value 0.117). There was no significant difference between the two groups with respect to vaginal or perineal tears. Birth weight and Apgar score were also similar. However, the mean fetal head circumference (HC) was smaller in Greenland (Table 3). There was a tendency for PPH in participants from Greenland but this did not reach statistical significance (Table 3).

DISCUSSION

Although there are significant differences between the labour wards, Nuuk and Aabenraa were also similar. Both had a liberal birthing culture, where midwives allow the participant to push earlier, and to a greater extent were open-minded to non-invasive interventions before

resorting to instrumental delivery. Due to the small sample size of 50 participants in this pilot study, we were not able to distinguish the two groups with respect to interventions like CS and ventouse deliveries.

Factors during birth

In the univariate analysis (Table 3), there was a tendency for a shorter duration of MEE in Greenland. A mean duration of MEE for nulliparae and multiparae were consistent with the current literature on the second stage of labour [1, 22]. When adjusted for parity, epidural anaesthesia and gestational age, no significant difference was found between duration of MEE in Greenlandic and Danish women. In the univariate analysis there was a tendency for participants in Greenland to have a shorter labour (Figure 4), but this may be due to differences in parity.

Using multivariate analysis for ethnicity, parity and duration of pregnancy, epidural probably may be a confounding variable (IRR = 1.88; CI = 1.04 - 3.42; p-value 0.038). Greenland does not offer epidural as standard pain relief during birth. It is therefore not clear whether it is the epidural, paity or the ethnic difference that results in the shorter duration of MEE in Greenland. Due to sample size and a higher recruitment (59%) in Denmark without epidural (Table 2), a proper analysis on this could not be carried out. Previous research has indicated that exposure to epidural may decrease endogenous oxytocin and prostaglandin production [23], which may prolong labour and increase the use of oxytocin [24] to augment labour.

Background

The high prevalence of smoking and pre-gestational BMI, is consistent with previous studies [25, 26](Table 1). In Greenland, 74% had a pre-gestational BMI >25kg/m^2 and 35% smoked during pregnancy. Adjusting for gestational age, BMI and tobacco consumption, neonatal birth weight was not significantly affected, probably due to the low sample size of this pilot study [27]. Despite the high pre-gestational BMI, no participant was diagnosed with gestational diabetes mellitus (GDM) [26], and it did not seem to significantly affect neonatal birth weight when adjusted for smoking, gestational age and ethnicity. In Aabenraa, participants with risk factors such as GDM requiring insulin and obesity, were delivered elsewhere. The difference between participants in Greenland delivering one week before participants in Denmark (Table 1), might be explained by the different methods of calculating the EDD [17]. Cervical dilatation was assessed digitally by vaginal examination, but it is a subjective assessment with potential inter-observer error. In line with previous research [1, 10], few participants in our study initiated MEE before full cervical dilatation, and no significant differences in the progression of normal labour were found with this variable. However, 78% participants in Greenland, started MEE before the fetal head was at the pelvic floor, compared to 19% in Denmark (Table 2).

The maternal urge to initiate MEE, before full dilation is achieved, can be due to malpositions of fetal head such as occiputo-posterior presentation [28]. Descent of the fetal head, rotation, cervical dilatation and the urge to initiate MEE are not necessarily related. Several studies with respect MEE may be due to malrotation [29], and many participants may be unaware that they make small MEE early in labour during contractions [30]. Cervical dilation <8cm combined with the maternal urge to initiate MEE early has been associated with an increase in medical interventions [6]. Under these circumstances, MEE should be delayed until the head rotates and is at the pelvic floor. The midwives in Nuuk, had undocumented experience of Greenlanders having a more gradual transition from smaller pushes in the first stage of labour, to MEE in second stage, but there are conflicting opinions in the literature on the management of the second stage of labour [31].

Ultrasound

The present study found that the transperineal head-perineum distance was significantly longer for participants in Greenland (Table 2). These findings might be due to confounding

variables, such as experience of the sonographer, pressure exerted, angle of the ultrasound probe and timing of the scan in relation to contractions. Using the transperineal method, it makes the angle slightly different and the distance to bone tissue slightly longer, when compared with other studies using the translabial method. Since the same apparatus and technique was used in both groups, our results were comparable. The sonographs in Aabenraa (CO and M.Å) were trained by a fetal medicine physician using a full-size ultrasound scanner to ensure continuity of technique. In Nuuk, all the measurements were performed by two midwives (V.B and L.P). A greater variation of transperineal head-perineum distance was observed in Denmark compared to Greenland, which is explained by differences in labour management (Figure 5). Hierarchical mixed effect model was used to adjust for potential bias, fixed effects (parity, fetal head at the pelvic floor and gestational age) and random effects. The different measurement method or sonographer will have some influence on the variation, but not directly on the mean.

Ethnic differences

In Denmark, the mean HC was significantly 0.9 cm larger than in Greenland (Table 3). After adjusting for smoking, gestational age and ethnicity, there was no significant difference in HC between the two groups. HC did not seem to influence the duration of MEE. While no data were available on pelvimetry among Inuit women, data from other ethnic groups demonstrate that the angle of the subpubic arch and HC were independently associated with, and predictive of, unplanned instrumental delivery [32]. Women requiring emergency CS or ventouse delivery had a larger HC and a narrower subpubic arch compared with those who had a spontaneous vaginal birth [32]. An Italian study found a fetal HC of 37-41 cm was associated with almost 50% of the unplanned instrumental deliveries [33]. In our pilot study, there were only five babies in Denmark with a HC ≥ 37 cm, and there were none in Greenland.

Environmental factors

In our study, the birth weight was similar between the two groups, despite the difference in gestational age (Table 1). It was not possible to elucidate whether this discrepancy in the HC was related to genetic or environmental differences. It has been proposed that alcohol, heavy metals, or other pollutants might affect the growth of babies *in utero* [34, 35, 36]. The shorter gestational age might also be explained by a previous study conducted on Inuit children [37], which demonstrated that elevated umbilical cord concentrations of polychlorinated biphenyls, hexachlorobenzene and mercury were significantly associated with shorter gestational age. The ACCEPT study [34], found no significant relation between fetal birth weight, length, and HC, with maternal serum levels of lipophilic persistent organic pollutants. Alcohol exposure during pregnancy has been linked to fetal alcohol spectrum disorder, including reduced HC, brain volume, and cognitive function [36] but no participants in Greenland in this present study reported the use of alcohol during pregnancy.

Methodological considerations

The methodological strengths of this study include a prospective approach that enabled the investigators to study several outcomes using the same type of ultrasound apparatus and technique. However, as a pilot study, it has a few inherent limitations. The study was bicentric and observational, which prevents causal inferences, and raises the risk of selection bias as a result of a selective and systematic “sorting” by omitting the participants having a precipitous birth, and therefore not included. Due to the method of ultrasound measurement, singleton pregnancies with cephalic presentations were chosen. Finally, due to the nature of the small sample size of a pilot study, CS and instrumental delivery could not be analysed.

CONCLUSION AND FURTHER RESEARCH

When using univariate analysis, the duration of MEE in Greenland was shorter, with a median difference of 13 minutes. However, when using negative binomial regression and adjusting

for parity, use of epidural analgesia and gestational age, no significant difference was found between duration of MEE in Greenlandic and Danish participants. Pushing before the fetal head was on the pelvic floor was around 3.7 times more frequent in Greenland. No correlation was found between early MEE and shorter duration of MEE. The hypothesis that the people giving birth in Greenland have higher rates of PPH was not supported by the univariate analysis. Participants in Greenland delivered around one week earlier, and the HC was ~1 cm smaller, although the birth weight was like Denmark. Whether this is due to a random effect, consistent erroneous measurement, genetic or environmental differences remains unknown. This pilot study found an overall shorter median difference in birth, but no other conclusive results (Figure 4). However, it seems that epidural and parity could be the main confounders to explain the difference in the duration of MEE between the two groups.

To address whether the duration of MEE differs according to different management techniques, a study should be conducted with and without epidural analgesia. The option of early MEE following the urge to push should be investigated further, particularly with respect to malrotation and malposition of the fetal head. We would also like to explore the influence of cultural and anthropological anatomical differences and the likely influences these have on the management of the second stage of labour.

The option of a wider ultrasound probe being developed for this kind of handheld scanner, being to perform translabial as a more accurate measure due to the difference in distance and angle should be explored. If there is interest in using transperineal head-perineum distance, a comparable study should be made with a smaller and larger probe. The use of ultrasound was less invasive compared to digital vaginal examination and was supplemental in the assessment of the descent of the fetal head [38]. The different methods of conducting the second stage of labour, supports some consideration and merits a larger well designed comparative trial.

To our knowledge, this international study of the management of second stage is original and we feel it is of clinical importance. With respect to scientific merit, we appreciate the limitations of a pilot study, but we feel this would justify a larger modified randomized controlled trial.

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None of the authors have any financial, personal, political, intellectual, or religious interests to declare.

CONTRIBUTION TO AUTHORSHIP:

The main idea of the concept was proposed by B.F.M, who has been to Greenland and had the experience of women giving birth faster with earlier MEE. For further development and planning of this project, B.F.M was the main supervisor educating M.Å and C.O, in co-supervision with J.S.J. Administrative work was carried out by M.Å and C.O, which included writing protocol, admission to ethical committees and patient information. The oral

patient information, inclusion and ultrasound scanning was performed by M.Å, C.O and V.B. Analysis of the collected data was performed by M.Å, C.O and B.F.M. The article has been written by M.Å and C.O with guidance regarding professional and academic considerations from J.S.J and linguistic corrections from F.R.L.

PARTICIPANT'S CONSENT:
All participants received written and oral information about the project and what data was being collected. Oral consent was given before the ultrasound scan, and written consent was given after birth.

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There has not been any funding to our submission.

ETHICS APPROVAL
The Science Ethics Committees for the Region of Southern Denmark decided that the study was not notifiable to the Scientific Ethics Committee, since there was no use of biological material, and the Greenlandic Health Service approved the project on the 7th of October 2020, case number 2020-14333.

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Table 1: Background information for participants giving birth in Denmark and Greenland. P-value <0.05 is highlighted in bold, inter quartile range (IQR), standard deviation (SD).

Factor	Level	Denmark n=27	Greenland n=23	p-value
Gestational age in days, mean (SD)		283.1 (8.0)	276.7 (8.2)	**0.007**
Pregestational BMI, median (IQR)		24.0 (22.0, 27.0)	27.5 (24.8, 32.8)	**0.002**
BMI 25.0 (kg/m^2)	Over	10 (38 %)	17 (74 %)	**0.009**
	Under	17 (63 %)	6 (26 %)	
Ethnicity	Danish	23 (85 %)	3 (13 %)	**<0.001**
	Greenlandic	1 (4 %)	19 (83 %)	
	Other	3 (11 %)	1 (4 %)	
Age participant, mean (SD)		29.5 (3.6)	29.1 (6.3)	0.76
Earlier CS	No	23 (85 %)	21 (91 %)	0.51
	Yes	4 (15 %)	2 (9 %)	
Legal abortion	No	22 (81 %)	10 (43 %)	**0.005**
	Yes	5 (19 %)	13 (57 %)	
Smoking during pregnancy	No	26 (96 %)	15 (65 %)	**0.004**
	Yes	1 (4 %)	8 (35 %)	
Parity	Multi	12 (44 %)	16 (70 %)	0.075
	Nulli	15 (56 %)	7 (30 %)	
Parity, median (IQR)		0 (0, 1)	1 (0, 2)	**0.030**
Gravida , median (IQR)		2 (1, 2)	3 (3, 6)	**<0.001**

Table 2: Factors during birth comparing Denmark and Greenland. Dexter occiput anterior (DOA), occiput anterior (OA), occiput posterior(OP), sinister occiput anterior (SOA)

Factor	Level	Denmark n=27	Greenland n=23	p-value
Induction of labour	No	20 (74 %)	19 (83 %)	0.47
	Yes	7 (26 %)	4 (17 %)	
CTG	No	6 (22 %)	16 (70 %)	**<0.001**
	Yes	21 (78 %)	7 (30 %)	
Epidural analgesia	No	16 (59 %)	23 (100 %)	**<0.001**
	Yes	11 (41 %)	0 (0 %)	
Oxytocin	No	18 (67 %)	17 (74 %)	0.58
	Yes	9 (33 %)	6 (26 %)	
Cervical dilation (cm), median (IQR)		10 (10, 10)	10 (10, 10)	0.66
Pushing fully dilated (10 cm)	No	5 (19 %)	4 (19 %)	0.96
	Yes	22 (81 %)	17 (81 %)	
Head at the pelvic floor	No	6 (22 %)	17 (81 %)	**<0.001**
	Yes	21 (78 %)	4 (19 %)	
Position of head (-3 to +3), median (IQR)		2 (2, 3)	0 (0, 1)	**0.004**
Head to perineum distance (mm), mean (SD)		35.9 (11.2)	56.2 (13.0)	**<0.001**
Birthing position	Knee/elbow	2 (8 %)	4 (20 %)	0.47
	Semi sitting	17 (65 %)	11 (55 %)	
	Side	6 (23 %)	3 (15 %)	
	Standing	1 (4 %)	2 (10 %)	
Head position birth	DOA	13 (48 %)	13 (62 %)	0.68
	DOA/OA	1 (4 %)	0 (0 %)	
	OA	2 (7 %)	2 (10 %)	
	OP	1 (4 %)	0 (0 %)	
	SOA	10 (37 %)	6 (29 %)	

Table 3: Different outcomes for women giving birth in Denmark and Greenland.

Factor	Level	Denmark n=27	Greenland n=23	p-value
Vaginal birth	No	1 (4%)	1 (4%)	0.91
	Yes	26 (96%)	22 (96%)	
MEE (min), median (IQR)		23 (12, 41)	10 (6, 26)	**0.046**
Tear grade (1-4)	0	3 (11%)	6 (27%)	0.23
	1	12 (44%)	9 (41%)	
	2	11 (41%)	4 (18%)	
	3	1 (4%)	2 (9%)	
	4	0 (0%)	1 (5%)	
Bleeding (ml), median (IQR)		400 (200, 800)	400 (270, 900)	0.51
Birth weight (g), mean (SD)		3736 (444)	3720 (483)	0.90
Macrosomia (4000 g)	Over	9 (33%)	5 (22%)	0.36
	Under	18 (67%)	18 (78%)	
Head circumference (cm), mean (SD)		35.4 (1.2)	34.5 (1.1)	**0.007**
APGAR /1 min	6	1 (4%)	0 (0%)	0.88
	7	2 (7%)	2 (9%)	
	8	2 (7%)	1 (4%)	
	9	4 (15%)	3 (13%)	
	10	18 (67%)	17 (74%)	
APGAR /5 min	7	1 (4%)	0 (0%)	0.64
	9	2 (7%)	2 (9%)	
	10	24 (89%)	21 (91%)	