



Full length article

Does pelvic floor muscle contraction early after delivery cause perineal pain in postpartum women?

Hedwig Neels^{a,b,*}, Stefan De Wachter^{b,c}, Jean-Jacques Wyndaele^c, Michel Wyndaele^c, Alexandra Vermandel^{a,b}^a Department Rehabilitation Sciences and Physiotherapy, University of Antwerp, Wilrijk, Belgium^b Department of Urology, Antwerp University Hospital, Edegem, Belgium^c Department of Urology, University of Antwerp, Wilrijk, Belgium

ARTICLE INFO

Article history:

Received 13 September 2016

Received in revised form 4 November 2016

Accepted 10 November 2016

Keywords:

Perineal pain

Pelvic floor muscle training

Postpartum

Pelvic floor muscle contraction

ABSTRACT

Objective: Pelvic floor muscle training is effective and necessary in the prevention and treatment of pelvic floor dysfunction during pregnancy and after childbirth. But because of the high prevalence of perineal pain observed in women after childbirth, many women and caregivers fear to start pelvic floor muscle training immediately after childbirth. However, it is unknown whether pelvic floor muscle contractions (PFMC) provoke perineal pain in women shortly after childbirth. Therefore, the main objective is to study whether PFMC performed immediately after childbirth is painful or not.

Study design: Observational longitudinal study. Perineal pain was assessed (1–6 days and 9 weeks postpartum) using a visual analogue scale (VAS 0–10) during PFMC and during several activities of daily living (ADL), during micturition and defecation. Descriptive statistics, Wilcoxon and McNemar tests were used.

Results: A total of 233 women participated (148 primiparous and 85 multiparous). Immediately postpartum the prevalence and intensity of pain during ADL (73%; VAS 4.9 (±2.3)), micturition (47%; VAS 3.4 (±1.7)) and defecation (19%; VAS 3.6 (±2.2)) were significantly higher (all $p < 0.000$) than during PFMC (8%; VAS 2.2 (±0.9)). At 9 weeks postpartum, 30% experienced perineal pain during sexual intercourse (VAS 4.6+/- 2.3) and 18% during defecation (VAS 4.7+/- 2.3), but none during PFMC.

Conclusion: Perineal pain is highly prevalent immediately after childbirth during ADL, micturition and defecation, but not during PFMC (only 8%). In case perineal pain occurs during PFMC, the intensity of pain is low (VAS 2). These results show that fear of perineal pain should not discourage women to start pelvic floor muscle training shortly after childbirth.

© 2016 Elsevier Ireland Ltd. All rights reserved.

Introduction

Pregnancy and childbirth are main risk factors for pelvic floor dysfunction such as urinary incontinence (UI), anal incontinence, pelvic organ prolapse and sexual problems [1,2].

Pelvic floor muscle training (PFMT) is known to be effective in the prevention and treatment of pelvic floor dysfunction during pregnancy and after childbirth [3,4], and therefore has an important role in the peripartum period. Muscular reinforcement during perineal rehabilitation reduces urinary stress incontinence

and anal incontinence [5]. PFMT after delivery should at first be focused on restoring voluntary contraction of the weakened musculature [6].

Pregnancy and delivery are also the most common risk factors for perineal pain in the early postpartum period. Perineal pain is defined by the International Continence Society as the complaint of pain felt between the posterior fourchette (posterior lip of the introitus) and the anus [7,8]. Some researchers define perineal pain in a broader region: as any pain occurring in the perineal body, the area of muscular and fibrous tissue, which extends from the symphysis pubis to the coccyx [9]. Recent research found a high prevalence of perineal pain postpartum, ranging from 74% to 90%, with 37% reporting moderate or severe pain [10,11]. Evidence shows that perineal tissue damage is the most important risk factor for perineal pain postpartum. Perineal tissue damage can occur with diverse birth interventions including episiotomy, forceps, vacuum extraction, prolonged expulsive period and

Abbreviations: PFMT, pelvic floor muscle training; PFMC, pelvic floor muscle contractions; UI, urinary incontinence; VAS, visual analogue scale.

* Corresponding author at: Faculty of Medicine and Health Sciences, Revaki. Campus Drie Eiken - Lokaal D.S.022, Universiteitsplein 1 - 2610, Wilrijk, Belgium.

E-mail address: hedwig.neels@uantwerpen.be (H. Neels).

newborn characteristics including birth weight [12], head circumference and position of the baby at birth [13,14].

Perineal pain can impact a woman's daily activities including sleep patterns, urinary and bowel function and practical care of her infant [15,16]. Although preventive PFMT has an important role in peripartum pelvic floor dysfunction, the prevalence of perineal pain during PFMT after delivery has never been studied before. Recent research revealed that PFMT started early after obstetrical anal sphincter injuries (within 30 days) reduces anal incontinence significantly compared to PFMT given within 6–8 weeks postpartum [6]. But many women and caregivers are cautious or even restrained to start PFMT early after childbirth because of the pain they complain about.

The aim of this study is to investigate whether and to which extent pelvic floor muscle contraction (PFMC) provokes perineal pain in women shortly after delivery and nine weeks later. Secondary we will register which activities of daily living provoke perineal pain shortly after delivery and nine weeks later. And also the influence of parity, delivery methods, newborn anthropometric characteristics, pain medication and prepartum pelvic floor dysfunction on the prevalence of perineal pain will be investigated.

Materials and methods

Design

Observational longitudinal survey. Study subjects were recruited within 1–6 days after delivery at the maternity ward, University Hospital Antwerp. A good knowledge of the Dutch, French or English language was a prerequisite for inclusion. Exclusion criteria were the presence of an indwelling bladder catheter. Written informed consent was obtained from all participating women. The study was approved by the local ethics committee (BE300201318334).

Questionnaire immediately after delivery

The date of delivery, characteristics of the mother and newborn, number of parity and gravidity, and characteristics of most recent delivery (perineal trauma, use of epidural analgesia and method of delivery) were obtained through medical records of the women. Participants were asked whether they ever experienced urinary incontinence before and during pregnancy (yes or no question).

The postpartum complaints which were evaluated consisted of use of abdominal pressure during voiding (straining), pain during micturition and defecation and the intensity of this pain (visual analogue scale (VAS) from zero to ten, zero = no pain, ten = worst pain ever). The subjects were also questioned regarding the use of laxatives and pain medication. Finally, subjects were invited to point the localization of the perineal pain on an illustration figure of a vulva.

Validation of the anamnestic questions and physical exam, as described, has been done (first by peers, then in a pilot sample of 22 women, of which were not included in the sample).

Clinical examination immediately after delivery

The clinical examination was performed by a physiotherapist, specialized in PFMT. Activities with a risk of provoking pain were assessed: activities of daily living (ADL) and pelvic floor muscle contractions. Perineal pain was scored on a VAS [0–10] during: sitting on a chair, standing up from a chair, standing, adduction-abduction in supine position, turning in bed from supine to prone position and coughing. Subjects were also asked to perform a Valsalva maneuver (Valsalva pushing: women were asked to strain as if they wanted to make stool and Valsalva blowing: women were

asked to breath out forcibly while the mouth and nose were firmly closed). Then, women were, undressed, positioned in the lithotomy position. First assessment of the dermatomes (L1–S5) was performed using a cotton swab. Second, visual observation of the perineal area and vagina was performed during PFMC. A normal analytic PFMC was defined as a ventral and inward displacement of the perineum [17,18]. Women were asked to perform three consecutive contractions and relaxations. Women who did not show correct PFMC after three consecutive tries received verbal instructions on how to contract the pelvic floor muscles and were then re-evaluated. Perineal pain was again scored on VAS.

Questionnaire around nine weeks after delivery

All participants were contacted by phone or by email at around nine weeks after delivery.

Women were asked if they still experienced perineal pain (VAS and location). If they felt no pain at the time of the interview, they were asked to recall if they had experienced perineal pain after the first part of the study, how long that pain had lasted, where exactly they had felt it and how intense that pain had been (VAS).

Women were also asked if they felt pain during micturition and defecation and during sexual intercourse at that moment, nine weeks after delivery. Perineal pain during ADL and Valsalva maneuver was assessed again with VAS scores.

Finally, study subjects were asked if they had performed the PFMC exercises as they had been taught on the maternity ward. And if they felt perineal pain during PFMC performed at nine weeks postpartum, during the assessment. Immediately after childbirth they were advised to perform at least two times per day, 20 contractions in a row, each day. During the data analysis, a minimum of 20 PFMC, at least four days a week was used as definition for “performing regular exercises”.

Statistical analysis

Equivalence/non-inferiority test was performed to the hypotheses that the prevalence of perineal pain during PFMC immediately after delivery would be less than 5% (actual proportion = 0.02). The objective to include 230 participants was determined. Statistical analysis was carried out using SPSS version 22.0 for Windows. Descriptive statistics, Wilcoxon, McNemar and Chi-Square tests were used. Non parametric tests were used to compare VAS scores between groups.

Results are given as number (n), percentage of whole group, mean \pm standard deviation (M (\pm SD)).

Results

Two hundred thirty-three women (148 primiparous and 85 multiparous) participated in the study (M 2.4 ± 1.2 days postpartum) immediately after delivery. Hundred ninety-nine of them agreed to participate also in the second part of the study, approximately nine weeks after delivery. Eight women were excluded for the second part because they were not able to perform an analytic PFMC immediately after childbirth. Mean age of the participants was 30.4 ± 4.4 years old; characteristics are presented in Table 1. Nine women (4%) delivered twins.

A descriptive overview of urinary incontinence, primiparity, use of epidural anesthesia, method of delivery, perineal trauma and the use of painkillers can be found in Table 2. The clinical evaluation of perineal sensation using the Q-tip test for light touch was normal in all participants in all dermatomes.

The prevalence and intensity of perineal pain immediately after childbirth are presented in Table 3. Pain was significantly less

Download English Version:

<https://daneshyari.com/en/article/5689613>

Download Persian Version:

<https://daneshyari.com/article/5689613>

[Daneshyari.com](https://daneshyari.com)