

ASSOCIATION BETWEEN REGION OF PERINEAL TRAUMA, LOCAL PROBLEMS, AND IMPAIRED HABITUAL ACTIVITIES AND PHYSIOLOGICAL NEEDS

ASSOCIAÇÃO ENTRE REGIÃO DO TRAUMA PERINEAL, PROBLEMAS LOCAIS, ATIVIDADES HABITUAIS E NECESSIDADES FISIOLÓGICAS DIFICULTADAS

ASOCIACIÓN ENTRE REGIÓN DEL TRAUMA PERINEAL, PROBLEMAS LOCALES, ACTIVIDADES USUALES Y NECESIDADES FISIOLÓGICAS DIFICULTADAS

Eula Rayssa Ximenes Ferreira¹
Erika Anny Costa Cerqueira²
Isa Maria Nunes³
Edna Maria de Araújo⁴
Evanilda Souza de Santana Carvalho⁵
Luciano Marques dos Santos⁶

How to cite this article: Ferreira ERX, Cerqueira EAC, Nunes IM, Araújo EM, Carvalho ESS, Santos LM. Association between region of perineal trauma, local problems, and impaired habitual activities and physiological needs. *Rev baiana enferm.* 2018;32:e23812.

Objective: to analyze the association between region of perineal trauma, local problems, and impaired habitual activities, and physiological needs in postpartum women in the immediate vaginal postpartum. **Methods:** cross-sectional study, carried out in a public maternity in Feira de Santana, state of Bahia, Brazil, from May 2013 to December 2015, by applying forms, collecting information in medical records, and conducting a vulvoperineal exam in 684 postpartum women. **Results:** there was a higher prevalence of pain (PR=3.4; p=0.000), edema (PR=2.5; p=0.028), and difficulty to sleep (PR=2.0; p=0.013), walk (PR=1.6; p=0.033), and sit (PR=2.4; p=0.001) among postpartum women with a trauma in the posterior perineum. Reports of burning sensations (PR=0.5; p=0.01) and difficulty to urinate (PR=0.5; p=0.002) were more likely to occur in women with a trauma in the anterior region. **Conclusion:** traumas in the posterior perineum cause more pain, edema, and difficulty to sleep, walk and sit, whereas traumas in the anterior region are more related to reports of burning sensations and difficulty to urinate.

Descriptors: Obstetric nursing. Perineum. Episiotomy. Postpartum period.

Objetivo: analisar a associação entre a região do trauma perineal e os problemas locais, as atividades habituais e as necessidades fisiológicas dificultadas em puérperas no pós-parto vaginal imediato. *Método:* estudo transversal,

¹ Nurse. Feira de Santana, Bahia, Brazil. eularayssa@outlook.com

² Undergraduate student in nursing in the State University of Feira de Santana. Extension scholarship student of the Institutional Program of Extension Scholarships of the State University of Feira de Santana. Feira de Santana, Bahia, Brazil. anny_c@live.com

³ Ph.D. in nursing. Assistant professor at the Federal University of Bahia. Salvador, Bahia, Brazil. isamaria.nunes@yahoo.com.br

⁴ Ph.D. in public health. Full professor at the Health Department of the State University of Feira de Santana. Feira de Santana, Bahia, Brazil. ednakam@gmail.com

⁵ Ph.D. in nursing. Full professor at the Health Department of the State University of Feira de Santana. Feira de Santana, Bahia, Brazil. evasscarvalho@yahoo.com.br

⁶ Nurse. Master of nursing. Doctoral student in sciences in the nursing graduate program of the Nursing School of the Federal University of São Paulo. Assistant professor at the Health Department of the State University of Feira de Santana. Feira de Santana, Bahia, Brazil. lucmarxenfo@yahoo.com.br

realizado em uma maternidade pública de Feira de Santana, Bahia, Brasil, de maio de 2013 a dezembro de 2015, com aplicação de formulários, coleta em prontuário e exame vulvoperineal de 684 puérperas. Resultados: houve maior prevalência de dor (RP=3,4; p=0,000) edema (RP=2,5; p=0,028), dificuldade para dormir (RP=2,0; p-valor=0,013), deambular (RP=1,6; p=0,033) e sentar (RP=2,4; p=0,001) entre puérperas com trauma no períneo posterior. Relatos de ardor (RP=0,5; p=0,01) e dificuldade na micção (RP=0,5; p=0,002) apresentaram maior probabilidade de ocorrer entre mulheres com trauma na região anterior. Conclusão: os traumas no períneo posterior causam mais dor, edema e dificuldade para dormir, sentar e deambular, ao passo que os traumas na região anterior provocam maior relato de ardor e dificuldade na micção.

Descritores: Enfermagem obstétrica. Períneo. Episiotomia. Período pós-parto.

Objetivo: analizar la asociación entre región del trauma perineal y problemas locales, actividades usuales y necesidades fisiológicas dificultadas en puérperas durante el posparto vaginal inmediato. Método: estudio transversal realizado en maternidad pública de Feira de Santana, Bahia, Brasil, de mayo de 2013 a diciembre de 2015, aplicándose formularios, recolección desde historias clínicas y examen vulvoperineal en 684 puérperas. Resultados: hubo mayor prevalencia de dolor (RP=3,4; p=0,000) edema (RP=2,5; p=0,028), dificultad para dormir (RP=2,0; p=0,013), deambular (RP=1,6; p=0,033) y sentarse (RP=2,4; p=0,001) entre puérperas con trauma del períneo posterior. Reportes de ardor (RP=0,5; p=0,01) y dificultad en la micción (RP=0,5; p=0,002) tienen mayor posibilidad de ocurrencia entre mujeres con trauma en la región anterior. Conclusión: los traumas del períneo posterior provocan mayor dolor, edema y dificultad para dormir, sentarse y deambular, mientras que los traumas en la región anterior provocan más reportes de ardor y dificultad en la micción.

Descriptor: Enfermería obstétrica. Períneo. Episiotomía. Período posparto.

Introduction

The female perineum, a set of soft tissues which closes the pelvic cavity inferiorly, is crossed by the anus in the posterior region and the vagina and the urethra in the anterior region. It is usually divided, in the level of the bi-sciatic line, into anterior or urogenital and posterior or anal. The anterior part encompasses external genital organs and superficial (ischiocavernosus, bulbocavernosus, and superficial transverse) and deep (deep transverse and external sphincter of the urethra) muscles, whereas the posterior region contains the anus and the external sphincter muscle of the anus⁽¹⁾.

During childbirth, most women suffer some type of trauma in this region, resulting from spontaneous lacerations and/or episiotomy. These traumas may have several causes and be associated with fetal and obstetric factors, including episiotomy itself⁽²⁾. This procedure is commonly performed by obstetric physicians and nurse midwives to avoid spontaneous lacerations⁽³⁾.

The implementation of good practices of childbirth can contribute to preventing perineal traumas. One example is the use of hot

compresses and perineal massage, given that intermediate-quality evidence suggests that these measures are potential reducing agents of fourth-degree lacerations⁽⁴⁾. However, a high frequency of perineal traumas is still observed.

The Brazilian survey "Birth in Brazil", which evaluated the use of good obstetric practices and interventions during child labor, identified an episiotomy rate of 56.1% in postpartum women who had a low obstetric risk. The final report of the investigation did not show national data about spontaneous perineal lacerations⁽⁵⁾. Nevertheless, episiotomy must be employed with caution and only when necessary, given all the repercussions of the excess of interventions for the well-being of women⁽⁶⁾. It is noteworthy that, in vaginal childbirth, during detachment of fetal presentation, the muscles that make up the perineum region stretch in synergy with the vagina to form a membranous channel subject to injury, such as spontaneous lacerations⁽⁷⁾.

A cross-sectional study carried out with 317 primiparous women that had perineal laceration showed that 23.7% of them presented lacerations in the anterior region of the perineum exclusively,

52% only in the posterior region, and 24.3% in both sides⁽²⁾.

To prevent damage in the perineal region, including local infection or delayed healing, episiotomy and spontaneous laceration require suture of their borders. Nevertheless, the procedure is not necessary for small lacerations that affect the vaginal mucosa⁽³⁾.

It is known that the presence of perineal suture in the immediate postpartum can lead to signs and symptoms, for instance pain, edema, and burning sensation, and consequently, difficulties to perform basic activities, such as care to the newborn and self-care, in addition to interfering with sleep, movement, urination, evacuation, and appetite of postpartum women⁽⁸⁾. These problems can also be related to non-sutured lacerations. These impediments may lead to important physical, psychological, and emotional implications that contribute to the emergence of an association of childbirth and postpartum with negative experiences⁽⁹⁾. The data present in literature, however, do not consider the region where the perineal trauma occurred as an exposure factor for the described postpartum outcomes.

To answer the research question “Is there an association between the perineal region of the injury and the compromising of the site, habitual activities and physiological needs in the vaginal postpartum?”, the present study had the objective to analyze the correlation between the location of the perineal trauma and compromising of the site, habitual activities and physiological needs in postpartum women in the immediate vaginal postpartum.

Method

This was a cross-sectional study carried out in the rooming-in care unit of a public maternity in the city of Feira de Santana, state of Bahia, Brazil, from May 2013 to December 2015. This maternity is a medium-size hospital institution, which provides care to women during labor, childbirth, and postpartum, and to newborns in normal or pathological conditions.

The sample of the present investigation was chosen by convenience and included 684 postpartum women selected according to the following criteria: to be a postpartum woman of a singleton, vaginal, and vertex childbirth, to present a perineal trauma caused by episiotomy or spontaneous laceration, to have delivered in that unit, to have a postpartum longer than six hours at the time of data collection, and to have had living fetuses with no congenital malformations.

Exclusion criteria were postpartum women who underwent an episiotomy and had spontaneous perineal lacerations in the same postpartum period and those who presented shoulder dystocia during childbirth, which led to the need to perform an episiotomy or the occurrence of spontaneous laceration and evolved into a cesarean.

Data were collected in medical forms of the selected patients, in structured interviews conducted with postpartum women six hours after childbirth, and in a vulvoperineal exam. Collaborating researchers were trained by the main researcher of the present study to carry out these activities.

Medical forms were used as a source of information regarding identification, sociodemographic conditions (race/skin color, age group, and level of education), gestational (number of prenatal appointments, gestational age) and parity (level of parity) details, conditions of the care received during childbirth (time of hospitalization in the obstetric center), and weight of newborns. Race/skin color classification was self-reported.

The interviews were carried out in the living room of the nursing unit to keep the privacy of the postpartum women, and allowed to collect data regarding habitual activities (walking, sitting, dressing, and breastfeeding) and physiological needs (sleeping, urinating, performing intimate hygiene, evacuating, eating) that were impaired by the perineal trauma and the problems (burning sensation, edema, and pain) resulting from the injuries. In addition, the numeric pain rating scale was applied.

A vulvoperineal exam was used to identify the perineal condition (spontaneous laceration or episiotomy) and problems caused by the presence of the injuries, such as hematoma around the perineal lesion, vulvar edema, erythema, and evisceration. To collect these data, researchers and collaborators were helped by nurses from the unit. To preserve the privacy of the postpartum women, a folding screen was used during the exam.

Data were entered into the SPSS software version 22.0. A univariate analysis was conducted using absolute and relative frequency distributions, and a bivariate analysis, to determine the association between the exposure variables (region of the perineal injury described as anterior or posterior perineum) and outcome (perineal problems, and impaired habitual activities and physiological needs), prevalence ratios (PR) and their respective confidence intervals (CI) of 95% and level of significance of 5% ($p < 0.05$) were calculated using Pearson's chi-square test.

The present study observed the ethical aspects of Resolution no. 466/12 of the Brazilian National Health Council⁽¹⁰⁾, and was approved by the Research Ethics Committee of the State University of Feira de Santana under report

842,198. All the participants were oriented about the objectives, strategies for data collection, risks, and benefits of the investigation, and the preservation of their anonymity through the reading of a free and informed consent form.

Results

The sample was 684 women who had the region of the perineal trauma identified. Among these, 41.5% were between 21 and 30 years old and 40.8% were up to 20 years old. The average age was 23.5 years. The majority of the women in the sample (90.1%) considered themselves black and 38% completed high school. Regarding obstetric characteristics, 64.2% attended six or more prenatal appointments (average=6.16, standard deviation=2.2), 63% were primiparous, and 79.5% had full-term newborns. The average time of hospitalization in the obstetric center was 6.09 hours (standard deviation=6.605), and 59.8% were hospitalized for up to five hours. In addition, 60.2% resorted to oxytocin and 51.3% presented spontaneous lacerations. Most childbirths (71.8%) were performed by physicians, and 43.1% happened in the evening. The most frequent position for childbirth was horizontal (94.7%). Concerning newborns, 88.2% weighted from 2,501 to 4,500 grams (Table 1).

Table 1 – Frequency of sociodemographic, obstetric, and neonatal variables of postpartum women with perineal traumas in a public maternity. Feira de Santana, Bahia, Brazil – 2013-2015 (N=684)

(continued)

Variables	n (%)	Mean (standard deviation)
Age		
Up to 20 years	279 (40.8)	
Between 21 and 30 years	284 (41.5)	23.5 (6.565)
31 years or over	121 (17.7)	
Race/skin color		
Black (including brown)	616 (90.1)	
White	49 (7.1)	
Yellow	17 (2.5)	
Indigenous	2 (0.3)	
Level of education		
Cannot read or write	8 (1.2)	
Incomplete elementary school	191 (27.9)	
Complete elementary school	49 (7.2)	
Incomplete high school	154 (22.5)	

Table 1 – Frequency of sociodemographic, obstetric, and neonatal variables of postpartum women with perineal traumas in a public maternity. Feira de Santana, Bahia, Brazil – 2013-2015 (N=684)

(conclusion)

Variables	n (%)	Mean (standard deviation)
Complete high school	260 (38)	
Incomplete higher education	15 (2.2)	
Complete higher education	7 (1.0)	
Number of prenatal appointments		
Up to five appointments	245 (35.8)	
Six or more appointments	439 (64.2)	6.16 (2.215)
Level of parity		
Primiparous	431 (63)	
Secondiparous	168 (24.6)	0.54 (0.856)
Three or more	85 (12.4)	
Gestational age		
< 36 weeks	57 (8.3)	
Between 37 and 41 weeks	544 (79.5)	38.8 (1.760)
> 42 weeks	83 (12.2)	
Time of hospitalization in the obstetric center		
Up to 5 hours	409 (59.8)	
Between 6 and 10 hours	174 (25.4)	6.09 (6.605)
More than 11 hours	101 (14.8)	
Use of oxytocin		
Yes	412 (60.2)	
No	272 (39.8)	
Perineal condition		
Spontaneous laceration	351 (51.3)	
Episiotomy	333 (48.7)	
Professional that performed the childbirth		
Nurse midwife	44 (6.4)	
Physician	534 (78.1)	
General nurse	106 (15.5)	
Shift during which the childbirth occurred		
Evening	295 (43.1)	
Morning	198 (28.9)	
Afternoon	191 (28)	
Position used in the childbirth		
Horizontal	648 (94.7)	
Vertical	36 (5.3)	
Weight of the newborn		
Up to 2,500 grams	55 (8.0)	
Between 2,501 and 4,500 grams	603 (88.2)	3155.13 (512.630)
More than 4,501 grams	26 (3.8)	

Source: Created by the authors.

In the examined sample, 82.2% of the women had traumas in the posterior perineum caused by spontaneous laceration and episiotomy, and 17.8% presented traumas in the anterior perineum, provoked by spontaneous lacerations

only. Difficulties in habitual activities were reported by 80.4% of the postpartum women and 79.7% showed local problems resulting from the traumas (Table 2).

Table 2 – Frequency of the region of perineal trauma, local problems, and impaired habitual activities and physiological needs in postpartum women in a public maternity. Feira de Santana, Bahia, Brazil – 2013-2015 (N=684)

Variables	n	%
Region of perineal trauma		
Posterior perineum	562	82.2
Anterior perineum	122	17.8
Total	684	100
Posterior perineum		
Spontaneous laceration	234	41.6
Episiotomy	328	58.4
Total	562	100
Anterior perineum		
Spontaneous laceration	117	95.9
Episiotomy	5	4.1
Total	122	100
Impaired habitual activities and physiological needs		
Yes	550	80.4
No	134	19.6
Total	684	100
Local problems		
Yes	545	79.7
No	139	20.3
Total	684	100

Source: Created by the authors.

Women with traumas in the posterior region provided fewer reports of burning sensation (PR 0.5; CI 95%=0.34-0.86; p-value=0.010), and a

higher probability to experience pain (PR 3.4; CI 95%=1.84-6.34; p=0.000) and edema (PR 2.5; CI 95%=1.07-6.08; p=0.028) (Table 3).

Table 3 – Association between region of perineal trauma and occurrence of local problems in postpartum women with perineal traumas in a public maternity. Feira de Santana, Bahia, Brazil – 2013-2015 (N=684)

Variables	Yes (n)	No (n)	Prevalence ratio (confidence interval)	p-value
Pain				
Posterior perineum	92.7% (422)	7.3% (33)	3.4 (1.845- 6.348)	0.000
Anterior perineum	78.9% (71)	21.1% (19)		
Burning sensation				
Posterior perineum	42.4% (193)	57.6% (262)	0.5 (0.347- 0.869)	0.010
Anterior perineum	57.3% (51)	42.7% (38)		
Edema				
Posterior perineum	15.6% (71)	84.4% (384)	2.5 (1.075- 6.083)	0.028
Anterior perineum	6.7% (6)	93.3% (83)		

Source: Created by the authors.

Concerning physiological needs, women with traumas in the posterior perineum presented more difficulty to sleep (PR=2.0; CI

95%=1.14-3.62; p=0.014) and fewer reports of difficulty to urinate (PR=0.5; CI 95%=0.32-0.78; p=0.002) (Table 4).

Table 4 – Association between region of the perineal trauma and difficulty to meeting physiological needs in postpartum women with perineal traumas in a public maternity. Feira de Santana, Bahia, Brazil – 2013-2015 (N=684)

Variables	Yes (n)	No (n)	Prevalence ratio (confidence ratio)	p-value
Sleep				
Posterior perineum	29.2% (133)	70.8% (322)	2.0 (1.149-3.621)	0.013
Anterior perineum	16.8% (16)	83.2% (79)		
Diuresis				
Posterior perineum	38.7% (176)	61.3% (279)	0.5 (0.320-0.781)	0.002
Anterior perineum	55.8% (53)	44.2% (42)		
Intimate hygiene				
Posterior perineum	38.9% (177)	61.1% (278)	0.8 (0.536-1.312)	0.440
Anterior perineum	43.2% (41)	56.8% (54)		
Evacuation				
Posterior perineum	7.5% (34)	92.5% (421)	2.5 (0.745-8.238)	0.127
Anterior perineum	3.2% (3)	96.8% (92)		
Eating				
Posterior perineum	2.9% (13)	97.1% (442)	0.9 (0.956-0.987)	0.095
Anterior perineum	0% (0)	100% (95)		

Source: Created by the authors.

Regarding impaired habitual activities, there was a statistically significant association between trauma in the posterior perineum and difficulty

to walk (PR=1.6; CI 95%=1.03-2.52; p=0.035) and sit (PR=2.4; CI 95%=1.41-4.03; p=0.001) (Table 5).

Table 5 – Association between region of perineal trauma and habitual activities in postpartum women with perineal traumas in a public maternity. Feira de Santana, Bahia, Brazil – 2013-2015 (N=684)

Variables	Yes (N)	No (N)	Prevalence ratio (confidence interval)	p-value
Walking				
Posterior perineum	58.2% (265)	41.8% (190)	1.6 (1.037-2.521)	0.033
Anterior perineum	46.3% (44)	53.7% (51)		
Sitting				
Posterior perineum	86.4% (393)	13.6% (62)	2.4 (1.414-4.036)	0.001
Anterior perineum	72.6% (69)	27.4% (26)		
Dressing				
Posterior perineum	20.2% (92)	79.8% (364)	1.1 (0.654-2.055)	0.612
Anterior perineum	17.9% (17)	82.1% (78)		
Breastfeeding				
Posterior perineum	10.5% (48)	89.5% (408)	1.1 (0.532-2.377)	0.759
Anterior perineum	9.5% (9)	90.5% (86)		

Source: Created by the authors.

Discussion

The perineal traumas of the women examined in the present study were located in the posterior perineum (82.2%). Episiotomies caused 51.3% of

the traumas, and spontaneous lacerations were responsible for 48.7%. A cross-sectional study developed with 317 primiparous women who had normal childbirth without episiotomy reported a frequency of traumas in the posterior region of

perineum of 52%, resulting from spontaneous lacerations only⁽⁸⁾. An investigation carried out with 3,425 postpartum women, of whom 45.6% were primiparous, identified a frequency of mild and severe lacerations around 37%⁽¹¹⁾, a rate similar to that found in the present study.

Posterior perineal traumas may result from spontaneous lacerations and/or episiotomies, and because they affect perineal muscles, they present a greater extension and depth. They usually require suture, which can cause perineal problems and limitation of some activities in the first days of postpartum.

In the present study, local problems occurred in 79.7% of the interviewed postpartum women, and the most frequent issues were pain, burning sensation, and edema, in both posterior and anterior perineum. There were statistically significant differences between posterior perineal trauma and these three problems. Women with traumas in the posterior perineum presented a prevalence 3.4 times higher of pain, 2.5 times higher of edema, and 0.5 times lower of burning sensation.

Since the presence of perineal trauma is statistically associated with the occurrence of pain during postpartum, pain is a common symptom among women with perineal trauma and may cause other problems^(9,12-15). A cross-sectional investigation which examined 147 postpartum women after vaginal childbirth following low-risk pregnancies found that 51.7% declared to experience perineal pain in immediate postpartum. However, 28.6% of the women did not present perineal trauma⁽¹⁵⁾. Another study showed a frequency of reports of perineal pain of 69.1% in postpartum women immediately after vaginal childbirth, and 80% had a perineal injury⁽¹⁶⁾.

A cross-sectional study developed with primiparous women demonstrated that the level of pain was related to the number of traumas the patients presented and that patients with perineal traumas had a number of reports of moderate pain four times higher than those with an intact perineum (20.7% *versus* 5.6%)⁽¹³⁾.

Another cross-sectional investigation which examined 281 postpartum women who had eutocic childbirths in Portugal concluded that perineal trauma was associated with the level of perineal pain when women were moving or seated, on the second day of postpartum. Women with episiotomies and first- or second-degree spontaneous lacerations were those who reported more intense pain, whether in rest, seated, or when moving or urinating⁽¹⁴⁾.

Regarding a burning sensation, the results of the present study revealed that trauma in the posterior perineum reduces in 50% the risk of women having a burning sensation, whereas women with trauma in the anterior region reported this feeling more frequently (57.3%). Small lacerations that affect the vaginal mucosa usually do not require suture⁽³⁾, which may be related to the presence of this sensation. In addition, this symptom is a consequence of the stimulation of superficial nerves and nerve endings of the skin⁽¹⁷⁾.

A cross-sectional study developed in São Paulo with 303 postpartum women demonstrated that 66.7% of the patients with spontaneous lacerations had vulvar burning⁽³⁾. It is possible to say that urination causes this discomfort, given that the location of the urethra in the anterior perineum facilitates the contact between urine and the small injuries which do not demand suture.

Edema may be present even in the absence of perineal traumas, deforming the vulvar region and causing pain⁽¹⁸⁾. An investigation identified a prevalence of 22% of edema two hours after childbirth, and of 13% from 24 to 48 hours of postpartum. This symptom was found in 16.7% of women with traumas in the posterior region, 15% of the patients with traumas in the anterior region, and 23.7% of women who presented problems in both sides⁽¹⁹⁾.

The mentioned perineal issues may relate to the type of thread and suture technique employed. Among the 303 women in the sample of a cross-sectional study carried out in São Paulo, 80.5% had perineal trauma and all of them received sutures with the simple catgut thread. Reports of

pain were present in 18.5% of the participants and 37.5% developed edema⁽¹²⁾. A prospective investigation carried out in Davangere, India, with a sample of 400 women, compared Vycril® and chrome threads and showed that the latter causes more perineal pain, local stiffness, dehiscence, and edema already in the immediate postpartum⁽²⁰⁾. Regarding the suture technique, a randomized controlled trial performed in São Paulo revealed that 16.7% of the women with perineal traumas sutured with the interrupted technique felt pain and consequently had difficulty to urinate⁽⁸⁾.

The data collected in the present study demonstrated that women with traumas in the posterior perineum presented a prevalence two times higher of difficulty to sleep and 50% fewer chances of having problems to urinate. This explains the fact that women with traumas in the anterior perineum have a more intense burning sensation. In addition, as mentioned previously, the pH of urine and the non-sutured superficial injuries may contribute for these discomforts to happen.

Regarding habitual activities, the most common reports of difficulties referred to sitting and walking. Women with traumas in the posterior perineum presented a prevalence 1.6 higher of difficulty to walk (CI 95%: 1.031-2.507) and 2.3 higher of difficulty to sit (CI 95%: 1.417-4.046).

In a descriptive investigation carried out in Ribeirão Preto, state of São Paulo, with 50 postpartum women who had had vaginal childbirth and underwent episiotomy, the participants declared to face limitations caused by perineal pain when executing the following activities: sitting, laying, walking, urinating, evacuating, performing intimate hygiene, and sleeping⁽²¹⁾. The results of another study pointed that interrupted suture impaired the sitting activity for 66.7% of the examined women and the walking action for 20%, because of the pain in the suture region⁽⁸⁾.

A study developed in Australia with 215 postpartum women whose objective was to identify the effects of pain in postpartum recovery

concluded that women with pain had difficulty to take care of or breastfeed their babies and to perform activities such as standing up, sitting, or walking⁽²²⁾.

The findings of the present investigation show that the problems resulting from perineal trauma can affect the quality of life of postpartum women for being associated with local problems that cause limitations⁽²¹⁾. The impact on well-being is illustrated, for instance, by the fear to go to the bathroom, the impossibility to do household chores and grocery shopping, the difficulty to seat at the table to eat, the feeling that their body is different, even abnormal, because of the trauma in the perineum, and the pain that hinders proper care to the newborn⁽²³⁾. This emphasizes that women need the support of their families during postpartum, and that healthcare professionals must implement care actions to try to prevent traumas or ease signs and symptoms related to them.

A method that can be implemented to reach this purpose is cryotherapy. A randomized controlled trial described its use in 10-minute sessions with postpartum women after vaginal childbirth with no edema nor third- or fourth-degree lacerations presenting complaint of pain with an intensity higher than 3 in the numeric scale. The results indicated that there was a statistically significant reduction in the intensity of pain in the group that resorted to cryotherapy in comparison to the control group (4.0 *versus* 0.7, $p < 0.0001$) in the observation of the symptom before and immediately after the intervention, as well as in the assessment of pain before and two hours after the use of the technique ($p = 0.002$). In addition, most women (77%) considered that the application of ice was comfortable⁽²⁴⁾.

Despite the existence of these practices, it is important to consider, as shown by the present study, that women are exposed to different limitations depending on the location of the perineal trauma, which must be taken into account before carrying out interventions to reduce signs and symptoms and increase the well-being of postpartum women.

The present investigation has some limitations. No publications were found in national and international literature comparing the region of the perineal trauma to the occurrence of perineal problems and difficulties to meet physiological needs and carry out habitual activities that could be related to the findings described in the present study. Consequently, the discussion was based on publications on women submitted to an episiotomy. In addition, the present investigation did not take into account the moment in which women presented perineal edema, that is, whether the problem happened during or immediately after childbirth or perineal suture, did not include women with an intact perineum, did not consider the position used in childbirth, and did not exclude women who did not have perineal suture nor non-sutured spontaneous lacerations for comparison purposes.

Conclusion

There was an association between the region of the perineal trauma and the occurrence of local problems, meeting physiological needs, and carrying out habitual activities by postpartum women after vaginal childbirth. There was a higher prevalence of perineal pain and edema among women with traumas in the posterior region of the perineum and of burning sensation among those with traumas in the anterior region.

Regarding meeting physiological needs and carrying out habitual activities, women with posterior perineorrhaphy reported more difficulty to sleep, walk, and sit. Those with a suture in the anterior region declared to have more difficulty to urinate.

The study allowed to conclude that traumas in the posterior perineum cause more pain, edema, and difficulty to sleep, sit, and walk, whereas traumas in the anterior region cause a higher number of complaints of burning sensation and difficulty during urination.

These results show that healthcare professionals responsible for care to parturient women must collectively discuss the frequency of episiotomy and spontaneous lacerations that

require suture to reduce the impact of these local traumas on the occurrence of perineal problems, habitual activities, and physiological needs in the immediate postpartum. Preventive measures are recommended to reduce the number of perineal traumas caused by childbirth.

It is also necessary to reformulate the care provided to women in this phase regarding the use of perineal protection and include the evaluation of the perineum and related comorbidities in the immediate postpartum as an indicator for healthcare professionals who work in rooming-in care units.

The authors suggest that new studies be carried out, given that the findings of the present investigation cannot be generalized, although they elucidate possible associations in the examined subject. Additionally, it is important to design studies that identify measures to minimize signs and symptoms related to perineal traumas, taking into account their specific location.

Collaborations:

1. conception, design, analysis, and interpretation of data: Eula Rayssa Ximenes Ferreira, Erika Anny Costa Cerqueira, Isa Maria dos Santos and Luciano Marques dos Santos;
2. writing of the article and relevant critical review of the intellectual content: Edna Maria de Araújo, Evanilda Souza de Santana Carvalho and Luciano Marques dos Santos;
3. final approval of the version to be published: Luciano Marques do Santos and Evanilda Souza de Santana Carvalho.

References

1. Montenegro CAB, Rezende Filho J. Bases morfológicas e funcionais do sistema genital. In: Rezende Filho J, Montenegro CAB. Rezende Obstetrícia. 12a ed. Rio de Janeiro: Guanabara Koogan; 2013. p. 37-50.
2. Riesco MLG, Costa ASC, Almeida SFS, Basile ALO, Oliveira SMJV. Episiotomia, laceração e integridade perineal em partos normais: análise de fatores associados. Rev Enferm UERJ. 2011;19(1):77-83.

3. Scarabotto LB, Riesco MLG. Fatores relacionados ao trauma perineal no parto em nulíparas. *Rev Esc Enferm USP*. 2006;40(3):389-95.
4. Aasheim V, Nilsen ABV, Reinart LM, Lukasse M. Perineal techniques during the second stage of labour for reducing perineal trauma. *Cochrane Database Syst Rev* [Internet]. 2017 June 13 [cited 2018 Feb 9];6:CD006672. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/28608597>
5. Leal MC, Pereira APE, Domingues RMSM, Theme Filha MM, Dias MAB, Nakamura-Pereira M, et al. Intervenções obstétricas durante o trabalho de parto e parto em mulheres brasileiras de risco habitual. *Cad Saúde Pública*. 2014;30(Suppl 1):17-32.
6. Brasil. Ministério da Saúde. Comissão Nacional de Incorporação de Tecnologias ao SUS. Diretriz Nacional de Assistência ao Parto Normal: Relatório de recomendação [Internet]. Brasília: 2016. [cited 2017 Sep 12]. Available from: http://conitec.gov.br/images/Consultas/2016/Relatorio_Diretriz-PartoNormal_CP.pdf
7. Caroci AS, Riesco MLG, Leite JS, Araújo NM, Scarabotto LB, Oliveira SMJV. Localização das lacerações perineais no parto em mulheres primíparas. *Rev Enferm UERJ*. 2014;22(3):402-8.
8. Almeida SFS, Riesco MLG. Ensaio clínico controlado aleatório sobre duas técnicas de sutura do trauma perineal no parto normal. *Rev Latino-am Enfermagem* [Internet]. 2008 [cited 2016 Feb 2];16(2):1-8. Available from: http://www.scielo.br/pdf/rlae/v16n2/pt_16.pdf
9. Francisco AA, Oliveira SMJV, Santos JO, Silva FMB. Avaliação e tratamento da dor perineal no pós-parto vaginal. *Acta Paul Enferm*. 2011;24(1):94-100.
10. Brasil. Ministério da Saúde. Conselho Nacional de Saúde. Resolução n. 466, de 12 de dezembro de 2012. Aprova as diretrizes e normas regulamentadoras de pesquisas envolvendo seres humanos. Brasília; 2012.
11. Oliveira LS, Brito LGO, Quintana SM, Duarte G, Marcolin AC. Perineal trauma after vaginal delivery in healthy pregnant women. *São Paulo Med J* [Internet]. 2014 [cited 2018 Mar 9];132(4):231-8. Available from: <http://www.scielo.br/pdf/spmj/v132n4/1516-3180-spmj-1516-3180-2014-1324710.pdf>
12. Amorim Francisco A, Junqueira Vasconcellos de Oliveira SM, Barbosa da Silva FM, Bick D, Gonzalez Riesco ML. Women's experiences of perineal pain during the immediate postnatal period: a cross-sectional study in Brazil. *Midwifery* [Internet]. 2011 Dec [cited 2016 Feb 2];27(6):254-9. Available from: [http://www.midwiferyjournal.com/article/S0266-6138\(10\)00173-7/fulltext](http://www.midwiferyjournal.com/article/S0266-6138(10)00173-7/fulltext)
13. Francisco AA, Kinjo MH, Bosco CS, Silva RL, Mendes EPB, Oliveira SMJV. Associação entre trauma perineal e dor em primíparas. *Rev Esc Enferm USP*. 2014;48(Esp):40-5.
14. Ferreira CMM. Dor perineal no pós-parto: estudo de alguns fatores associados [dissertação]. Viseu (PT): Instituto Politécnico de Viseu, Escola Superior de Saúde de Viseu; 2011 [cited 2016 Feb 2]. Available from: <http://repositorio.ipv.pt/handle/10400.19/1622>
15. Mathias AERA, Pitangui ACR, Vasconcelos AMA, Silva SS, Rodrigues PS, Dias TG. Mensuração da dor perineal no pós-parto vaginal imediato. *Rev Dor* [Internet]. 2015 out-dez [cited 2016 Feb 2];16(4):267-71. Available from: http://www.scielo.br/pdf/rdor/v16n4/pt_1806-0013-rdor-16-04-0267.pdf
16. Soares ADS, Couceiro TCM, Lima LC, Flores FLL, Alcoforado BEM, Couceiro Filho RO. Association of Pain Catastrophizing with the Incidence and Severity of Acute and Persistent Perineal Pain after Natural Childbirth: Longitudinal Cohort Study. *Rev Bras Anesthesiol* [Internet]. 2013 [cited 2018 Mar 9];63(4):317-21. Available from: https://ac.els-cdn.com/S0104001413000031/1-s2.0-S0104001413000031-main.pdf?_tid=96074786-5631-4837-89cc-c8df758ddcec&acdnat=1520902377_28cf536035b995445206bfd38bb1eba0
17. Moore KL, Dalley AF, Agur AMR. Anatomia orientada para a clínica. 7a ed. Rio de Janeiro: Guanabara Koogan; 2014.
18. Riesco MLG, Oliveira SMJV. Avaliação do edema perineal no pós-parto: concordância entre observadores. *Rev gaúcha enferm*. 2007 dez;28(4):465-72.
19. Leite JC. Caracterização das lacerações perineais espontâneas no parto normal [dissertação]. São Paulo (SP): Universidade de São Paulo; 2012 [cited 2016 Feb 2]. Available from: <http://www.teses.usp.br/teses/disponiveis/7/7141/tde-20022013-151836/pt-br.php>
20. Bharathi A, Reddy DB, Kote GS. A prospective randomized comparative study of vicryl rapide versus chromic catgut for episiotomy repair. *J Clin Diagn Res* [Internet]. 2013 Feb [cited 2016 Feb 2];7(2):326-30. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/23812381>

- nlm.nih.gov/pmc/articles/PMC3592303/pdf/jcdr-7-326.pdf
21. Beleza ACS, Ferreira CHJ, Sousa L, Nakano AMS. Mensuração e caracterização da dor após episiotomia e sua relação com a limitação de atividades. *Rev Bras Enferm.* 2012 mar-abr;65(2):264-8.
 22. East CE, Sherburn M, Nagle C, Said J, Forster D. Perineal pain following childbirth: Prevalence, effects on postnatal recovery and analgesia usage. *Midwifery* [Internet]. 2012 Feb [cited 2016 Feb 2];28(1):93-7. Available from: [http://www.midwiferyjournal.com/article/S0266-6138\(10\)00188-9/fulltext](http://www.midwiferyjournal.com/article/S0266-6138(10)00188-9/fulltext)
 23. Way S. A qualitative study exploring women's personal experiences of their perineum after childbirth: Expectations, reality and returning to normality. *Midwifery* [Internet]. 2012 Oct [cited 2018 Feb 9];28(5):712-9. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/21978497>
 24. Francisco AA, Oliveira SMJV, Steen M, Nobre MRC, Souza EV. Ice pack induced perineal analgesia after spontaneous vaginal birth: Randomized controlled trial. *Women Birth* [Internet]. 2018 Jan [cited 2018 Feb 9]. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/29337008>

Received: September 2, 2017

Approved: March 13, 2018

Published: July 24, 2018



The Revista Baiana de Enfermagem use the Creative Commons license – Attribution -NonComercial 4.0 International. <https://creativecommons.org/licenses/by-nc/4.0/>

This article is an Open Access distributed under the terms of the Creative Commons (CC BY-NC). This license lets others remix, adapt and create upon your work to non-commercial use, and although new works must give its due credit and can not be for comercial purposes, the users do not have to license such derivative works under the same terms.