

PERINEAL OUTCOMES IN VAGINAL DELIVERIES ACCOMPANIED IN A PUBLIC MATERNITY

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ABSTRACT

About 85% of women who deliver vaginally suffer some type of perineal trauma. Spontaneous injuries may lead to the need for suture, increased blood loss, perineal pain in the postpartum period, and represent a risk factor for the emergence of pelvic floor dysfunctions. Perineal lesions are related to the assistance given during labor. The aim of this research was to describe the socioemographic and obstetric characteristics and the prevalence of perineal trauma in deliveries. This is a cross-sectional study, descriptive analytical and quantitative in approach, with secondary data collection from physical/electronic medical records between January and March 2022, to be conducted at the Hospital e Maternidade Dona Iris, a public hospital that is a reference in maternal and child health in the Midwest Region. The data will be entered into statistical software, Statistical Package for the Social Sciences (SPSS) version 22.0. Simple statistics with absolute and relative frequency will be performed. Data were collected after review and approval by the Research Ethics Committee of the Hospital e Maternidade Dona Iris, under number 5.610.634. The results found in this study allow us to conclude that perineal trauma must be treated with importance by assistance to parturient women, as they can result in negative outcomes for the woman in the physical, psychological, emotional and social aspects; with long-term consequences.

KEYWORDS: PERINEUM. INJURY. EPISIOTOMY. CHILDBIRTH CARE. WOMEN'S HEALTH

INTRODUCTION

In the perspective of a humanized care model and aiming to minimize maternal and neonatal risks, in Brazil, there is the Humanization of Childbirth Program (PHPN), the National Policy for Integral Attention to Women's Health (PNAISM) and the initiative Rede Cegonha, which was implemented with the purpose of guaranteeing access to health services, reception and resolution in the obstetric area¹.

On an international level, the World Health Organization (WHO) defends freedom of position and movement during labor, the encouragement of vertical positions during childbirth and the restrictive practice of episiotomy. Brazil is the country with the highest rates of maternal and perinatal morbidity and mortality, as well as cesarean sections in the world^{2,3}.

Of the women who perform vaginal delivery, a percentage of 85% suffer some type of perineal trauma. Such injuries can lead to increased blood loss, the need for suturing, postpartum perineal pain and a risk factor for the onset of pelvic floor disorders, such as urinary and fecal incontinence and pelvic organ prolapses¹.

Perineal trauma, as a result of vaginal delivery, is characterized as the loss of integrity of the perineum, which may involve lacerations of different degrees. It is associat-

ed with short- and long-term morbidities, such as perineal pain, dyspareunia, symptoms of depression, increased risk of puerperal infection and bleeding⁴.

Among women who have already faced perineal trauma, 40% report pain in the first 2 postpartum weeks. In women with an intact perineum, pain and discomfort disappear within the first 10 days after childbirth, while women who have experienced perineal trauma report pain during the 3 months following childbirth⁵.

Lacerations are classified according to depth degrees according to the affected tissue degrees, the most serious being those that affect the anal sphincter. There are many factors reported in the literature associated with the increased incidence of perineal trauma, including primiparity, instrumental delivery, fetal macrosomia, advanced maternal age and controllable factors⁴.

Among the controllable factors are unconventional birth positions (standing, semi-sitting, sideways, on all fours, squatting, birthing stool, kneeling, bathtub delivery), which have been associated with an increase in the intact perineum when compared to the lithotomy position, conventionally used because it allows viewing the perineum and facilitates some maneuvers^{4,6}.

According to the survey, "Born in Brazil", carried out by the Oswaldo Cruz Foundation (Fiocruz), the lithotomy po-

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sition is still the most used in the country (91.7%) and the episiotomy rate is close to 53.5%. It should be noted that the World Health Organization (WHO) refers to an acceptable episiotomy rate of 10%. Some traditional and routine practices are used and favor the occurrence of perineal trauma, namely, the induction of labor with synthetic oxytocin, episiotomy and the woman remaining in the lithotomy position ⁷².

The adoption of horizontal positions is a harmful practice during vaginal delivery and should be eliminated from obstetric practice, and there should be encouragement for vertical positions, whose obstetric outcomes are more positive ^{2,3}.

The lithotomy position is a risk factor for 1st and 2nd degree lacerations and 41.5% of deliveries in this position present an episiotomy, whereas vertical positions are protective, reducing the occurrence of episiotomy to 2.3% ⁹. Studies indicate a high rate of episiotomy in deliveries in lithotomy positions (38%), in lateral positions (6.7%). Supine positions are related to 3rd and 4th degree lacerations and higher rates of episiotomy ^{8,10,11}.

The main justification to support the adoption of vertical positions in childbirth is the gravitational action, which contributes to the descent of the fetus through the vaginal canal, in addition to modifying the angle of the maternal pelvis, horizontal positions make fetal descent difficult in the expulsive period ^{12,13}.

In this sense, the objective of this research was to describe the socioemographic and obstetric characteristics and the prevalence of perineal trauma in deliveries at the Hospital e Maternidade Dona Iris, a reference in maternal and child health in the Midwest Region.

METHODOLOGY

Study with cross-sectional design, analytical descriptive and quantitative approach. The cross-sectional study is an epidemiological research strategy that analyzes factor and effect in a given place and time, determining incidences and prevalence of a phenomenon ¹⁴.

The research was carried out at the Hospital e Maternidade Dona Iris, a public municipal hospital located in Goiânia, Goiás, a reference in maternal and child health in the Midwest Region, comprising 17 municipalities and having a population of 2,149,204 inhabitants. The Hospital e Maternidade Dona Iris has the capacity to carry out 3,600 births per year, an average of 300 per month, and represents the reference maternity hospital in the municipality and metropolitan region, offering gynecology, obstetrics, speech therapy, psychologists, social service and others ¹⁵. Secondary data collection was carried out at the aforementioned health unit between the months of January and March 2022. The research included medical records of pregnant women over 14 years of age, at normal risk, admitted in labor, with delivery assisted by a doctor

and/or obstetric nurse. Inconclusive medical records and patients who were admitted during the expulsive period were excluded.

For this study, the following variables were considered in the analysis process: age (in years); years of education, marital status (lives with a partner versus lives without a partner), perineal outcome (1st, 2nd, 3rd or 4th degree laceration), episiotomy (yes versus no), perineal suture (yes versus no), used instruments (vacuum versus forceps), use of inducers (oxytocin), delivery positions (vertical versus horizontal), fetal weight and APGAR score. Regarding obstetric clinical aspects, the variables will be analyzed: had prenatal care (yes or no), number of prenatal consultations, gestational age (in weeks) and high-risk pregnancy (yes versus no). Data were processed using the Statistical Package for Social Sciences (SPSS) software, version 22.0, for analysis of absolute and relative frequency.

Por se tratar de coleta secundária de dados, houve dispensa da utilização do Termo de Consentimento Livre e Esclarecido (TCLE) por se tratar de uma pesquisa descritiva, com coleta de dados secundária. Esta pesquisa foi aprovada pelo Comitê de Ética em Pesquisa do Hospital e Maternidade Dona Iris, sob o número 5.610.634. e respeitou os princípios éticos em pesquisa envolvendo seres humanos conforme a Resolução 466/2012 ¹⁶.

As this is a secondary data collection, there was no need to use the Free and Informed Consent Form (TCLE) as it is a descriptive research, with secondary data collection. This research was approved by the Research Ethics Committee of Hospital e Maternidade Dona Iris, under number 5,610,634. and respected the ethical principles in research involving human beings according to Resolution 466/2012 ¹⁶.

RESULTS

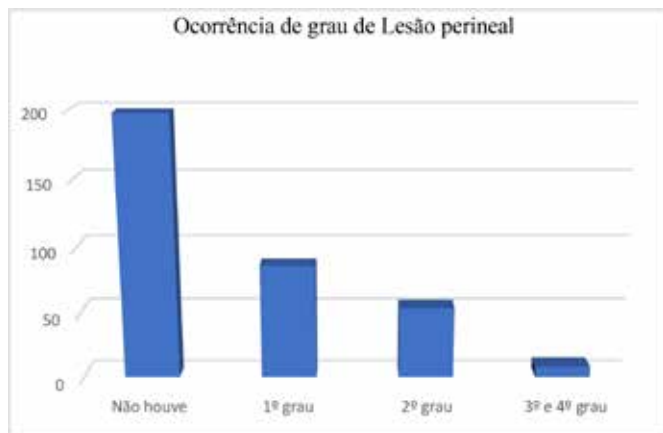
A total of 347 women who underwent vaginal delivery from January to March 2022 were analyzed. The prevalence of perineal injury found in this study was 46%, representing 159 women. Of the total number of pregnant women analyzed, 302 (87%) were aged between 19 and 39 years, most of whom were multiparous, 200 (58%), and had a full-term gestational age greater than 37 weeks at delivery, corresponding to 222 (64%).

Table 1 presents the obstetric characterization of women undergoing vaginal delivery.

Variables	N	%
Age, years		
14 - 18	38	11
19 - 29	230	66
30 - 39	73	21
40 - 45	6	2
Number of consultations		
≤ 6	178	51
> 7	169	49
Parity		
Primiparous	146	42
Multiparous	161	46
Grand multipara	40	12
Gestational age, weeks		
< 34	13	4
≥ 34 - 36 weeks 6 days	28	8
≥ 37 - 39 weeks 6 days	222	64
≥ 40	84	24
Accompanied		
Yes	345	99
No	2	1

Table 1. Obstetric characterization of women undergoing vaginal delivery, Goiânia, Brazil, 2022 (n= 347)

Graphs 1 show the occurrence of perineal injury in degrees in women undergoing vaginal delivery, respectively. In this sample, 188 (54%) pregnant women had an intact perineum, followed by 159 (46%) women with perineal injury, namely, first degree in 86 (25%), second degree in 54 (16%) and third and fourth degree in 8 (2%). The episiotomy rate in this study was 5%. Regarding the position adopted at the time of delivery, 254 (73%) assumed a semi-sitting position, 46 (13%) right or left lateral decubitus, 28 (8%) adopted squatting and 19 (6%) preferred a position on all fours or gaskin.



Graph 1. Occurrence of perineal laceration in vaginal delivery in degrees, Goiânia, Brazil, 2022 (n= 347).

Table 2 shows the occurrence of lacerations in vaginal delivery according to the position adopted at the time of delivery.

Delivery position	Perineal lesion	
	N	%
Semi-sitting		
Yes	120	35
No	134	40
Squatting		
Yes	13	3
No	15	4
Lateral		
Yes	21	6
No	25	7
Gaskin		
Yes	5	1
No	14	4

Table 2. Occurrence of perineal laceration in vaginal delivery versus position of vaginal delivery, Goiânia, Brazil, 2022 (n= 347).

Tables 3 and 4 show the occurrence of lacerations in vaginal delivery according to fetal weight and use of intrapartum oxytocin, respectively.

Fetal weight (grams)	Perineal lesion	
	N	%
≤ 2500		
Yes	13	45
No	16	55
2500 to 4000		
Yes	146	47
No	168	54
≥ 4000		
Yes	3	75
No	1	25

Table 3. Occurrence of perineal laceration in vaginal delivery versus fetal weight, Goiânia, Brazil, 2022 (n= 347).

Intrapartum oxytocin	Perineal laceration	
	N	%
Induction with oxytocin		
Yes	76	58
No	56	42
No oxytocin		
Yes	83	39
No	132	61

Table 4. Occurrence of perineal laceration in vaginal delivery versus the use of intrapartum oxytocin, Goiânia, Brazil, 2022 (n= 347).

DISCUSSION

This study revealed a prevalence of some type of perineal lesion in 159 (46%) women who underwent vaginal delivery, predominantly in the 19-39 age group, which represents 87% of the studied population; a small portion (11%) were 18 years old or younger and had a full-term pregnancy, longer than 37 weeks.

With regard to the social and obstetric profile of the analyzed women, the cross-sectional and quantitative study by Camargo et al¹⁷ with 104 women in a public hospital in Setúbal - Portugal, pointed to a prevalence of the age group above 30 years and primiparous pregnant women. Rodrigues et al,⁹ pointed out a predominance of multiparous women, aged between 20-34 years; resembling, therefore, the findings in the results of this research, in which a higher percentage of multiparous women prevailed; that is, women who have become pregnant two or more times. In addition, there was a prevalence of multiparous pregnant women admitted at term, that is, with gestational age greater than 37 weeks, with adequate prenatal care, as recommended by the Ministry of Health, with more than 7 consultations in 49% of pregnant women.

Prenatal care enables better perinatal results, thus contributing to women's empowerment and information about the process of pregnancy and childbirth. A well-conducted prenatal care can impact better maternal and neonatal outcomes, such as the occurrence of perineal injury, given that the woman has the opportunity to prepare for childbirth through exercises that strengthen her pelvic floor.

In this study, a prevalence of 46% of perineal injuries was observed, corroborating the cross-sectional study by Souza et al¹⁸ carried out with primiparous women from a maternity hospital in Fortaleza-CE, in which 159 (70.4%) women suffered perineal trauma during the work of childbirth.

Regarding the positions adopted during childbirth, the highest frequency of injuries was in pregnant women who adopted the semi-sitting position, in which the patient remains with the trunk elevated at 45° degrees, legs apart and flexed and the back on a rigid surface. This data is similar to the literature by Rodrigues et al⁹ who analyzed re-

cords of vaginal deliveries between the years 2017-2018, in a Normal Birth Center in the city of São Paulo and showed a higher percentage of first-degree perineal laceration in women who assumed a semi-sitting or lithotomy position, linked to a higher occurrence of episiotomy in these cases. This association is due to the fact that the horizontal position disfavors the amplitude of opening of the pelvis, which increases the chance of lacerations, in addition to decreasing the angle of descent of the fetus during the expulsion phase⁵. About the practice of episiotomy, in this study the rate found was 5%.

In the present study, the non-occurrence of perineal injury degree was predominant in most parturients (198), followed by 86 women with first-degree lacerations. Result similar to that found in Lopes' research; Leister; Riesco¹⁹, in which 415 women were analyzed, first-degree injuries prevailed in 257 (61.9%) women. However, the intact perineum was present in only 49 (11.8%) women. Based on these findings, it is understood that the assistance offered at the study site by the obstetric team corroborates good childbirth care practices, which encourage the adoption of vertical positions during childbirth.

Studies on perineal injury in vaginal deliveries have associated its occurrence with the use of intrapartum synthetic oxytocin^{20,21}. The deliveries induced by synthetic oxytocin had a higher number of perineal lacerations in the results described here. According to Zukoff et al, 2019, who analyzed the records of deliveries assisted by obstetric nurses in 2015, in a public maternity hospital in the city of Rio de Janeiro; the use of intrapartum oxytocin favors a serious traumatic evolution in the perineum, since the drug can cause uterine hyperstimulation, favoring a rapid expulsion of the fetus, thus increasing the risk of serious injuries.

A study on obstetric care in Brazil revealed that the use of oxytocin is higher in women with low education and public service users and deserves attention⁷. Oxytocin is a drug used in obstetric practice to correct uterine activity when there is a failure in the work of obstetrics delivery. However, it should not be used routinely and indiscriminately²². Therefore, it is suggested to use it in a restricted and individualized way.

When studying the neonatal variables, in this study, a greater number of lesions was observed in fetuses weighing more than 2,500 grams. The literature is still convergent on this relationship. A cross-sectional and retrospective study carried out in a maternity hospital in the city of Santa Maria-RS, based on the analysis of records in electronic medical records of deliveries that occurred in 2018, did not observe an association between fetal weight and perineal injuries; although this relationship is consolidated in several literatures²².

Other events such as shoulder dystocia and directed pulling are also cited in the literature as risk factors for perineal lacerations. However, the application of techniques

such as "hands off", massage and use of warm compresses in the perineal region contribute to perineal integrity, reducing the chances of third and fourth degree lacerations, which are considered more serious²¹.

Among the limitations of this study is the fact that it was retrospective with data from medical records, which could lead to bias, as data collection depends on the quality of the notes. Furthermore, the possibility of bias in the responses of pregnant women when filling out the medical records is considered, as well as the presence of variables without notes.

FINAL CONSIDERATIONS

In general, the results found in this study allow us to conclude that perineal trauma must be treated with importance by assistance to the parturient woman, as it can result in negative outcomes for the woman in the physical, psychological, emotional and social aspects; with long-term consequences.

It is crucial that the approach and management of health professionals in assisting women in labor be based on holistic and humanized care, placing the woman as the main driver and protagonist of her delivery, stimulating autonomy and self-confidence throughout the process. These actions can be strengthened during prenatal care through health education and access to information. Care centered on these pillars can favor greater well-being and comfort for these women, making their experience of vaginal delivery satisfactory and non-traumatic.

The results of this study can serve as a subsidy to promote improvements and adaptations in maternal care; in order to stimulate health professionals to encourage women about their rights to choose, being aware and informed of all risks and benefits. This study may also be relevant for the implementation of actions and procedures aimed at reducing morbidity statistics and negative outcomes during childbirth care.

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