

USE OF EPISIOTOMY AMONG RESIDENTS IN OBSTETRIC NURSING

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ABSTRACT: Objective: to identify the frequency of and justification for episiotomy in childbirths attended by residents in obstetric nursing. Method: Descriptive and retrospective study conducted in October-November, 2016, in a public maternity hospital in the city of São Paulo. The study population consisted of 884 low-risk pregnant women. Chi-square test was used for statistical analysis. Results: Episiotomy was performed in 174 (19.7%) deliveries and in 512 (59%) there were perineal lacerations. Perineal integrity was maintained in 187 (21.4%) deliveries. The main indications were related to perineal conditions: 54 (58.1%) perineal rigidity, 22 (23.7%) short perineum and 19 (20.4%) imminent severe laceration. Conclusion: The frequency of use of episiotomy by residents in obstetric nursing is higher than evidence based recommendations from the WHO, and regarding the reasons for the procedure, they differ from those generally reported worldwide, which leads to reflections about the model of professional training of obstetric nurses and the distance between theory and practice.

DESCRIPTORS: Episiotomy; Obstetric nursing; Perineum; Vaginal delivery.

PRÁTICA DE EPISIOTOMIA ENTRE RESIDENTES EM ENFERMAGEM OBSTÉTRICA

RESUMO: Objetivo: identificar a frequência e justificativa para a realização da episiotomia em partos assistidos por residentes em enfermagem obstétrica. Método: estudo descritivo e retrospectivo, realizado no período de outubro a novembro de 2016, em uma maternidade pública do município de São Paulo. A população do estudo foi constituída por 884 parturientes de baixo risco. Para análise estatística, utilizou-se o teste Qui-Quadrado. Resultados: a episiotomia ocorreu em 174 (19,7%) partos e em 512 (59%) houve lacerações perineais. A integridade perineal foi mantida em 187 (21,4%) partos. As principais indicações estiveram relacionadas às condições do períneo: 54 (58,1%) por rigidez perineal, 22 (23,7%) períneo curto e 19 (20,4%) eminência de laceração grave. Conclusão: a prática de episiotomia entre residentes está acima do recomendado pela OMS e, com relação às justificativas apresentadas, há discrepância com as mundialmente utilizadas, trazendo reflexões acerca do modelo de formação e do distanciamento entre teoria e prática.

DESCRIPTORES: Episiotomia; Enfermagem obstétrica; Períneo; Parto normal.

PRÁCTICA DE LA EPISIOTOMÍA ENTRE RESIDENTES DE ENFERMERÍA OBSTÉTRICA

RESUMEN: Objetivo: Identificar la frecuencia y la razón de ejecución de episiotomía en partos atendidos por residentes en enfermería obstétrica. Método: Estudio descriptivo, retrospectivo, realizado de octubre a noviembre de 2016 en maternidad pública del municipio de São Paulo. Población constituida por 884 parturientas de bajo riesgo. Para análisis estadístico se aplicó test de Chi-cuadrado. Resultados: Se practicó episiotomía en 174 (19,7%) partos, y en 512 (59%) hubo laceraciones perineales. Se mantuvo la integridad perineal en 187 (24,4%) de los partos. Las indicaciones principales se relacionaron con las condiciones perineales: 54 (58,1%) por rigidez perineal, 22 (23,7%) por períneo corto y 19 (20,4%) por inminencia de laceração grave. Conclusión: La práctica de episiotomía entre residentes supera lo recomendado por la OMS y, respecto a las razones presentadas, existe discrepancia con las mundialmente aplicadas, debiéndose reflexionar sobre el modelo de formación y de la distancia entre teoría y práctica.

DESCRIPTORES: Episiotomía; Enfermería Obstétrica; Períneo; Parto Normal.

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Received: 12/08/2017

Finalized: 06/11/2018

● INTRODUCTION

During the process of childbirth and birth, some structures of the pelvic and perineal region undergo constant modifications that may harm their tissues due to episiotomy or tears. An episiotomy is an obstetric intervention that consists in a surgical incision in the perineum to widen the opening of the vagina during childbirth⁽¹⁾. This procedure has been used for preventing perineal injury, but there is abundant evidence against its routine use.

The first documented episiotomy dates back to over 270 years ago, and the rates of the procedure increased in the first half of the twentieth century, when there was a growing movement for women to give birth in a hospital environment⁽²⁾. Thereafter, episiotomy has become the most common surgical procedure in the world, its practice was incorporated into the routine of childbirth care, although no studies had been carried out to assess its risks and benefits. Currently, restrictive use of episiotomy is recommended, and despite the evidence against its routine use, there is still a high prevalence in the use of episiotomy in the world⁽³⁾.

The main reasons for episiotomy are perineal rigidity, primiparity, multiparous women with previous episiotomies, adolescents, fetal macrosomia, occiput posterior position, shortening a prolonged expulsive period, non-reassuring fetal status, prematurity, use of forceps and vacuum assisted delivery, imminent thirddegree perineal laceration, lack of professional knowledge about perineal elasticity, routine taught in training, protection of the anterior perineum and maternal age⁽⁴⁾, given that episiotomies are performed more frequently in younger and primiparous women⁽³⁾.

The guide "Care in Normal Birth, a practical guide" of the "World Health Organization (WHO)" contains recommendations on best practices in childbirth and birth care. These practices were classified into four categories to guide actions and interventions, as follows: A - practices which are demonstrably useful and should be encouraged; B - practices which are clearly harmful or ineffective practices and should be eliminated; C - practices for which insufficient evidence exists to support a clear recommendation and which should be used with caution while further research clarifies the issue; D - practices which are frequently used inappropriately. The liberal or routine use of episiotomy is included in category D⁽⁵⁾.

The rates of episiotomy vary considerably in Brazil: Data from the Birth in Brazil Survey, published in 2014, reported a rate of 56.1% of episiotomy⁽⁴⁾. However, data from the National Survey on Demography and Health of Women and Children: (PNDS-2006) indicate that episiotomy was used in 70% of the births⁽⁶⁾, which reflects the model of maternity care adopted in Brazil, where conventional medical management of childbirth and birth prevail over the humanized model, revealing the urgent need to change this model.

The paradigm shift in childbirth and birth care will only be possible with the collaboration and work of managers, health professionals, students, researchers and users of the Unified Health System. In Brazil, in addition to other actions, it is necessary to invest in the training of health professionals, especially obstetric nurses, to ensure compliance with the principles of humanization, best practices of safe childbirth and birth. It should be stressed that health professionals play a key role in this process, as they use their knowledge to improve the well-being of mother and newborn and are able to identify when they will require interventions that will ensure their health needs are met⁽⁷⁾.

High-quality professional education is a key factor for the implementation of best practices and safe care. In this changing scenario, residency in obstetric nursing, a program funded and encouraged by the government aimed to train obstetric nurses to deliver care to pregnant women, emerges. This training should be based on best practices, scientific evidence, guidelines of the Unified Health System (SUS) and the recommendations of Rede Cegonha, of the National Policy for Women's Integral Health Care and the Pact to Reduce Maternal and Neonatal Mortality⁽⁸⁾.

This type of training provides residents with a greater number of practical experiences, enabling them to acquire professional skills, knowledge and skills that will help them make better decisions. In addition to providing residents with more skills and knowledge, the program must also encourage the questioning of important issues in obstetric nursing, such as the quest for professional autonomy, ethical and legal responsibilities, as well as conflicts between the conventional medical model and

the humanized model. However, the learning process is impaired by the lack of integration between theory and practice. Practice often does not correspond to what is taught in theory, and university teaching and services should work in an integrated way⁽⁸⁾.

In view of the aforementioned, the present study aimed to identify the frequency of episiotomy and the reason for the use of this procedure in childbirths attended by residents in obstetric nursing, as these professionals are in a training period, and the knowledge acquired during this period will reflect on their professional practice. Since there are few studies on this subject, providing reflections about the practice and the teaching-learning process will bring contributions to residence in obstetric nursing.

● METHOD

This is a descriptive and retrospective study with a quantitative approach. The study population consisted of pregnant women whose childbirths were attended by residents in obstetric nursing at Universidade Federal de São Paulo (UNIFESP) from March 2013 to February 2016. The National Residency Program in Obstetric Nursing was created in 2013 through the National Residency Program in Obstetric Nursing as a strategic action of Rede Cegonha. The Ministry of Health, in partnership with the Ministry of Education, has provided and funded residency vacancies in educational institutions throughout the country⁽⁹⁾.

The childbirths were conducted in a public maternity hospital located in the city of São Paulo, which has a Normal Birth Center (CPN) where care to low-risk pregnant women is provided by midwives and obstetrics nurses. In all procedures, the residents are accompanied by a nurse preceptor, obstetric nurses or midwives attached to the hospital, in accordance with the obstetric nursing residency program.

The inclusion criteria were low-risk pregnant women assisted by residents in obstetric nursing. Deliveries in which there was a direct participation of the medical staff in the care and deliveries assisted by residents of other sectors of the hospital were excluded.

The data were collected by the main researcher from the record book of births attended by residents in obstetric nursing, in the October-November 2016 period and transcribed to an instrument created for this purpose.

The variables of this study were grouped into maternal variables (those related to nursing care during childbirth) and fetal variables. The maternal variables were age of pregnant women; gestational age; number of pregnancies; number of deliveries (parity) and abortions; fetal position during birth and episiotomy, and when episiotomy was performed, the indication. Neonatal variables were birth weight and Apgar score. The indications for episiotomy were perineal rigidity, short perineum, imminent severe laceration, vaginal ring, maternal exhaustion, amniotic fluid, prematurity, fetal macrosomia, prolonged expulsive period, and non-reassuring fetal heart rate.

For descriptive analysis of categorical variables, frequency and percentages were calculated. For the continuous variables, mean, standard deviation, median, minimum and maximum values were calculated. Chi-Square test⁽¹⁰⁾ was used to compare categorical variables for episiotomy. A significance level of 5% (p-value <0.05) was used.

The study complied with the ethical guidelines of resolution 466 of December 12, 2012 and was approved on August 5, 2016 by the Research Ethics Committee of Universidade Federal de São Paulo (UNIFESP) under protocol no 1,664,764. The free informed consent was not necessary, as secondary use of data was involved.

● RESULTS

The results obtained refer to the 884 normal deliveries from low-risk pregnant women attended at the Normal Birth Center by residents in obstetric nursing. The women were aged 13- 46 years old, with

a median of 24 years and a mean of 25 years.

Regarding parity, 354 (40.0%) women were primiparous, 266 (30%) had delivered their second child and 263 (29.5%) were multiparous. Of the analyzed births, in 873 there were records of perineal laceration after birth, and episiotomy was reported in 174 (19.7%) of them. In 512 (59%) births there were perineal lacerations, of which 425 (48.7%) of first degree, 88 (10.1%) of second degree and two (0.2%) of third degree; and cervical laceration occurred in only one birth (0.2%). Perineal integrity was maintained in 187 (21.4%) deliveries. Of all the episiotomies performed, there was indication for this procedure in 93. In some cases there was more than one indication, which resulted in a greater number of indications in relation to the total number of episiotomies.

Regarding the primiparous women, episiotomy was present in 155 (43.7%) childbirths and the incidence of first and second-degree lacerations was 139 (39.2%) and 40 (11.2%), respectively. Third-degree laceration was observed in only one delivery (0.2%).

In women who had at least one previous delivery, the frequency of episiotomies was 19 (3.5%) and 172 (32.5%) of them maintained perineal integrity. First-degree perineal lacerations were the most frequent: 283 (53.4%), while second-degree lacerations occurred in only 46 (8.6%) of the deliveries. Third-degree laceration was present in only one delivery (0.1%).

Of all the episiotomies recorded in the study, perineal rigidity was observed in 54 (58.1%) deliveries, followed by short perineum, in 22 (23.7%), and imminent severe laceration, in 19 (20.4%) (Table 1).

Table 1- Distribution of indications for episiotomy according to the records of childbirths attended by residents in obstetric nursing. São Paulo, SP, Brazil, 2017

Reason (Multiple Answers)	N %
Perineal rigidity	54 (58.1)
Short perineum	22 (23.7)
Imminent severe laceration	19 (20.4)
Amniotic fluid	6 (6.5)
Fetal macrosomia	6 (6.5)
Vaginal ring	3 (3.2)
Prolonged expulsive period	3 (3.2)
Maternal exhaustion	2 (2.2)
Deceleration	2 (2.2)
Prematurity	1(1.1)
Others	2 (2.2)

Analysis of the indications for episiotomy in two groups: primiparous and women who had at least one previous delivery showed that there was no difference in the main indication. In both groups, perineal rigidity was the most common indication. In the deliveries of primiparous women, episiotomy due to perineal rigidity was reported in 44 (28.3%); short perineum, in 22 (14.1%), and imminent severe laceration in 14 (12.2%). Among the multiparous women, indications for episiotomy were rigid perineum: 8 (42.10%), fetal macrosomia, 4 (21%), and vaginal ring in one birth (5.2%).

Analysis of the associated factors reveals that the women who underwent episiotomy were aged in average 22.2 years, while those who did not undergo episiotomy were aged in average 25.8 years. The frequency of episiotomy 174 (19.7) was significantly higher in primiparous women, and was performed in 155 (89.0%) of them (Table 2).

Table 2 - Association between episiotomy, age and number of deliveries, according to the records of the births assisted by residents in obstetric nursing. São Paulo, SP, Brasil, 2017

	Episiotomy		Total	p-value
	Yes	No		
Maternal age				<0.0001*
Mean (DP)	22.22(5.23)	25.8(6.27)	25.09(6.24)	
Median	21	25	24	
Minimum-Maximum	14-42	13-46	13-46	
Total number of patients	173	703	876	
Number of Deliveries				<0.0001*
Mean (SD)	0.12(0.36)	1.32(1.24)	1.08(1.22)	
Median	0	1	1	
Minimum-Maximum	0-2	0-8	0-8	
Total number of patients	174	709	883	

* Chi-square test, level of significance of 5% (p-value < 0.05).

Regarding birth conditions, 752 (85.1%) of the newborns (NB) had Apgar score of 9 in the first minute. Apgar scores lower than seven were recorded in 11 (1.24%) births in the first minute of life. At the fifth minute of life, 528 (59.7%) had Apgar score of 10, 337 (38.1%) had a score of 9 and one (0.1%), had an Apgar score lower than 7. The average weight of the newborns was 3,351.79 grams, with a minimum of 1,890 and a maximum of 4,910 grams.

● DISCUSSION

The results indicate that the frequency of episiotomy was 19.7%, a lower percentage than the one found in a recent study conducted in Brazil, which assessed several factors related to childbirth and birth care and found an incidence of episiotomy in low-risk pregnant women in the country of 56.1%⁽³⁾.

Based on a randomized clinical trial conducted in England and published in 1984, the World Health Organization recommends an episiotomy rate of up to 10%⁽¹¹⁾.

The prevalence of episiotomy has been decreasing worldwide. In Finland the rate decreased from 71.5% to 54.9% among primiparous women and from 21.5% to 9.2% among multiparous women in ten years. The probability of episiotomy between these groups decreased 55% and 66%, respectively⁽¹²⁾.

However, some studies showed a significant discrepancy in the incidence of episiotomy among the countries. In Northern and Western Europe, rates range from 9.7% in Sweden to 87.3% in Spain⁽¹³⁾. In France, in the 2004-2009 period, the incidence decreased from 55.7% to 13.3%, without causing a significant increase in perineal trauma. On the other hand, when England implemented a policy that reduced episiotomy rates to 20 %⁽¹⁴⁾.

Regarding postpartum perineal outcomes, in addition to those related to episiotomies, the present study reported an incidence of 21.4% of intact perineum and 59% of perineal lacerations, as follows: 48.7% were first-degree lacerations; 10.1% were second-degree lacerations and 0.2%, third-degree lacerations.

A study conducted in 2017, in the state of Santa Catarina, with a population of 187 low-risk pregnant women, that assessed maternal outcomes of home births found an episiotomy rate lower than that found in the present study. There was only one episiotomy, accounting for 0.5% of the total births attended, 27.3% of intact perineum and 72.2% of perineal lacerations, as follows: 72.1% of first-degree, 7.9% of second-degree and no third and fourth-degree lacerations⁽¹⁵⁾.

A cohort study with 400 women in a non-episiotomy protocol at a maternity hospital in northeastern

Brazil found a high rate of intact perineum (about 56%), 20% of first-degree lacerations, 24% of second-degree lacerations and there were no reports of third and fourth-degree lacerations⁽¹¹⁾.

In this study, the main justifications for episiotomy were related to perineal condition. Perineal stiffness was the most frequent justification, with 58.1%, followed by short perineum, in 23.7% of cases, and imminent severe laceration in 20.4%. Indications related to the fetus and fetal well-being were less frequent. Indications related to fetal macrosomia occurred in 6.5% of the cases, prolonged expulsive period in 3.2% of the cases, deceleration (non-reassuring fetal heart rate) in 2.2% of the cases and prematurity in 1.1% of the cases.

Studies conducted in several countries reported the most frequent justifications for episiotomy. However, apparently no consensus has been reached. In contrast to the results observed, a study carried out in Finland, which compared indications in primiparous and multiparous women, showed that the higher risk of episiotomy in primiparous women was associated with vacuum assisted deliveries. In cases of macrosomic fetuses, there was again no significant difference in the probability of episiotomy between the two groups. In both groups there was a greater probability (three times greater) of episiotomy in deliveries with a prolonged expulsion period compared to those with a second stage of 15 minutes. However, one of the difficulties reported by the study was that the need for episiotomy in the subgroups was not very clear, and the justifications presented were not clear⁽¹²⁾.

In the Netherlands, a study with a population of low-risk pregnant women showed an incidence of episiotomy of 10.8% (20.9% in primiparous women and 6.3% in multiparous women). Regarding the reasons for the procedure, 46% of the procedures were performed because of the second stage of labor (prolonged expulsive period), 35% in cases of fetal distress, 19% for the prevention of severe perineal laceration or because of the history of previous episiotomy, 17% because of rigid perineum and 21% for other reasons (suspicion of a macrosomic fetus, position of abnormal fetal presentation, blood loss during the second stage and even because it was requested by the patient)⁽¹³⁾. In turn, in Saudi Arabia, in a survey that assessed episiotomy indicators in modern obstetrics, the rate was 51.2%, demonstrating that all primiparous women underwent this procedure and for them, the most frequent indication was rigid perineum. In women who had previous vaginal deliveries, the main justification was anterior perineal trauma⁽¹⁴⁾.

A systematic review conducted in 2009 found that the use of routine episiotomy does not reduce the risk of severe third and fourth-degree perineal trauma, besides causing greater bleeding, nor does it reduce the risk of urinary incontinence and does not mitigate pain. Selective episiotomy reduces the incidence of posterior perineal laceration and the need for suture, but increases the risk of anterior perineal trauma. However, this type of laceration causes less bleeding and less need for suturing. There was no difference in the Apgar scores between the routine and selective groups⁽¹⁶⁾. There is abundant scientific evidence that episiotomy should not be routinely performed, and regarding the reasons mentioned here, there is no strong scientific evidence to justify the indication. Some authors stress that such indications need to be more deeply investigated in randomized clinical trials⁽¹¹⁾.

The present study found that 89% of the episiotomies were performed in primiparous women, and 43.7% of the primiparae underwent this procedure. The mean age of the women who underwent episiotomy was lower than that of the women who did not undergo the procedure: 22.2 years and 25.8 years, respectively. These results corroborate the Birth in Brazil survey, which, through the study on labor interventions in low-risk pregnant women, revealed a high rate of episiotomy in primiparous women (75%). Corroborating our data, the survey also revealed the higher prevalence of episiotomy in younger women. Episiotomy was performed in 69.5% of the women aged 10-19 years old and in 52.3% of the women aged 20-34 years old⁽³⁾.

Another criterion that deserves mention is routine practice of episiotomy in primiparous women based on the concept that a clean surgical procedure is more efficient than perineal lacerations. However, studies show that the procedure, although it is a process free of complications, results in greater blood loss, higher infection rates and even in greater incidence of third and fourth-degree perineal lacerations⁽¹⁴⁾.

In an updated Cochrane review, which included 11 randomized controlled trials to compare routine episiotomy with selective episiotomy, it was concluded that selective episiotomy reduced by 30% perineal traumatism in pregnant women, and both selective and routine episiotomy had little or no

effect on the Apgar score below seven in the fifth minute of life of the newborn. It is concluded that routine episiotomy practice to reduce perineal trauma is not justified on the basis of current scientific evidence ⁽²⁾.

The incidence of episiotomy is high compared to some low-risk situations in developing countries, and is associated with high rates of adverse maternal outcomes. Some authors recommend episiotomy in cases where there are signs of fetal distress, at the second stage of prolonged expulsive period and to prevent the occurrence of sphincter damage. However, this latter case is controversial, since some observational studies have shown a protective effect of episiotomy, while others reported a higher incidence of anal sphincter injury when episiotomy is performed ⁽¹³⁾.

Criteria should be established for the use of the procedure, since observational studies demonstrated that episiotomy is a risk factor for lower pelvic floor, muscle strength, dyspareunia and perineal pain. In addition, episiotomy increases the probability of blood loss greater than 500 ml in primiparous and multiparous women, which impacts postpartum recovery, since women with perineal lacerations had considerably less perineal discomfort within 3 weeks after delivery compared with women who underwent episiotomy ⁽¹³⁾.

One limitation of this study is the lack of publications on childbirths attended by residents in obstetric nursing. However, it provides contributions on the performance of these professionals in obstetric interventions, in particular episiotomy, because there is still much disagreement on the ideal frequency and indications of use of the referred procedure.

● CONCLUSION

The frequency of episiotomy in childbirths attended by residents in obstetric nursing was 19.7%. Regarding the indications, perineal condition was the most frequent one and the highest prevalence was among the primigravidae.

As for the objective of this study, it was found that the frequency of use of episiotomy by residents in obstetric nursing is higher than evidence based recommendations from the WHO, and regarding the reasons for conducting the referred procedure, they differ from those generally reported worldwide, which leads to reflections about the model of professional training of obstetric nurses and the distance between theory and practice.

Based on the aforementioned, it can be seen that a paradigm shift must be made to childbirth care, from the training/educational process to the practice of health professionals. Collaboration among researchers, students and health professionals to promote an educational model that empowers these professionals based on the best practices in childbirth and birthcare and on scientific evidence aims to reduce episiotomy rates, since the educational process may impact the care delivered by health professionals and thus reduce morbidities associated with childbirth care.

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