OCCURRENCE AND FACTORS ASSOCIATED TO THE PRACTICE OF EPISIOTOMY

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ABSTRACT

Objective: determining the incidence and factors associated with episiotomy. Method: this is a retrospective study in which socio-demographic, maternal, of labor and the neonatal variables were analyzed in the records of 1,075 women who underwent episiotomy in a public hospital. It was used the chi-square tests, multiple logistic regression analysis and prevalence ratio, with p ≤ 0.05. The research project was approved by the Research Ethics Committee, Protocol n.271/11. Results: the occurrence of episiotomy was of 16%, there was an association between primiparity, younger age, no previous vaginal birth, oxytocin, lower Apgar scores in the first minute and meconium. After logistic regression, the variables that remained associated were no previous vaginal birth, oxytocin and lower Apgar scores in the first minute. Conclusion: it was low the occurrence of episiotomy, being the variables: previous vaginal birth, oxytocin and lower Apgar scores in the first minute associated with its practice. Descriptors: Normal Birth; Parity; Health Care; Women's Health.

RESUMO

Objetivo: determinar a ocorrência e fatores associados à episiotomia. Método: estudo retrospectivo no qual foram analisadas as variáveis sociodemográficas, maternas, de trabalhos de partos e neonatais nos prontuários de 1.075 mulheres submetidas à episiotomia em um hospital público. Utilizaram-se os testes Qui-quadrado, análise de regressão logística múltipla e razão de prevalência, com p ≤ 0.05. A pesquisa teve o projeto aprovado pelo Comitê de Ética em Pesquisa, Protócolo n.271/11. Resultados: a ocorrência de episiotomia foi de 16%; houve associação entre primiparidade, menor idade, ausência de parto vaginal anterior, ocitocina, menores índices de Apgar no primeiro minuto e meconíon. Após regressão logística as variáveis que permaneceram associadas foram ausência de parto vaginal anterior, ocitocina e menores índices de Apgar no primeiro minuto. Conclusão: foi baixa a ocorrência de episiotomia, sendo as variáveis: ausência de parto vaginal anterior, ocitocina e menores índices de Apgar no primeiro minuto associadas a sua prática. Descritores: Parto Normal; Paridade; Assistência à Saúde; Saúde da Mulher.

RESUMEN

Objetivo: determinar la incidencia y los factores asociados a la episiotomía. Método: este fue un estudio retrospectivo en el que se analizaron las variables sociodemográficas, maternas, de trabajos de parto y neonatales en los registros de 1.075 mujeres que se sometieron a la episiotomia en un hospital público. Se utilizaron las pruebas de chi-cuadrado, análisis de regresión logística múltiple y razón de prevalencia, con p ≤ 0.05. La investigación tuvo el proyecto aprobado por el Comité de Ética de la Investigación, de Protocelo n.271/11. Resultados: la ocurrencia de episiotomia fue del 16%, hubo una asociación entre primiparidad, edad inferior, sin un parto vaginal anterior, la ocitocina, las puntuaciones de Apgar bajas en el primer minuto y meconio. Después de la regresión logística, las variables que se mantuvo asociado hubo parto vaginal anterior, la ocitocina y las puntuaciones de Apgar bajas en el primer minuto. Conclusión: era baja la ocurrencia de episiotomia, siendo las variables: la ausencia de parto vaginal anterior, ocitocina y menores puntuaciones de Apgar en el primer minuto asociadas a su práctica. Descriptores: Parto normal; Paridad; Cuidado de La Salud; Salud de La Mujer.
INTRODUCTION

The pregnancy and birth, despite being considered physiological events, are unique in women's lives, with broader meanings, adaptations and care involving different aspects that encompass social, cultural, emotional and interpersonal values. An important condition that is associated with vaginal childbirth is perineal pain that affects most puerperals and that is influenced by factors such as higher degrees of perineal laceration and episiotomy conducting.

The spontaneous lacerations can be classified according to the level of involvement, depending on the affected tissue, being classified from the first to the fourth level. There are considered of first level lacerations involving hymen, lip, skin, vagina and vulva; second level when they involve pelvic floor, perineal muscles and vaginal muscles, excluding the involvement of the anal sphincter; third level when they reach an sphincter and rectal-vaginal septum; and fourth level when involving anal and rectal mucosa. While episiotomy corresponds to a superficial incision in the muscle of the perineum, which can be considered as a second level laceration.

Episiotomy is one of the most commonplace procedures in obstetric practice, and postulated that its routine use is related mainly to the prevention of severe perineal lacerations and its higher prevalence associated with nulliparity and maternal age. However, there is insufficient evidence in the literature that supports the benefits of routine use, and we observed that this practice does not prevent severe perineal lacerations and demonstrate that their restrictive use advantages. Still, its use would be associated with maternal morbidity in the postpartum period, such as the presence of pain of moderate intensity and interference both in carrying out daily activities in mobility.

Despite all the evidences on the downsides of their routine job, which is observed in hospitals is that women do not receive any information on this procedure at any time before birth, and that this practice often ends up being carried out without consent. Thus, because of excessive interventions and medicalization, women do not experience childbirth as something physiological and strengthening of their autonomy, and this time ends up violating the sexual and reproductive rights of women in labor.

In Brazil, episiotomy remains as a common practice that presents high rates that reach 94% of vaginal births, both public and private hospitals. Moreover, also observes that most professionals still cannot change the habit by clinging the traditional concepts and practices that do not value women's rights, the humanization of childbirth and that does not include current scientific evidence. In this sense, the change in behavior and the importance of continuing education in health care make it necessary for the breakdown of these tenets and improve the quality of care provided for women during childbirth occurs.

Based on the above, this study aims to determine the incidence and associated factors in the practice of episiotomy.

METHOD

This is a retrospective study conducted at Hospital Dom Malan managed Institute of Integral Medicine Professor Fernando Figueira IMP in the city of Petrolina, Pernambuco, Brazil. It is a public institution that exclusively pregnant women benefits contracted out by the Unified Health System (SUS), focusing on normal birth. According institutional data, on average occur 561 births per month, and of these, 254 are normal, 107 normal with risk, 12 cesarean and 188 cesarean with risk. Births in the institution are assisted by doctors and nurse-midwives, being the nursing staff performs only normal birth considered of low risk.

There were analyzed all medical records of women assisted in the period from January to May 2012, which complied the following inclusion criteria: subject to vaginal birth in the specified period and were excluded from the medical records of the participants who had fetal death prior to labor and fetal distress with weight less than or equal to 500 g. Among the 1,075 eligible records consulted, 36 did not contain information pertaining to the achievement or not of episiotomy, thus, resulting in a total of 1,039 records evaluated.

Data were collected from medical records of women and recorded on an evaluation form. Statistical analysis was performed using the program SPSS version 20.0 for Windows. To describe the characteristics of the sample measures of central and dispersion tendencies were used, and frequency distributions. To determine the association between the independent variables and the dependent variable (performing episiotomy), we used the chi-square test with a significance level of p ≤ 0.05. The prevalence ratio (PR) was calculated with a confidence interval of 95%.
Through a previously established model of causality, independent variables with a significance level of 20% for multivariate analysis were selected. An analysis of stepwise multiple logistic regression was performed, being demonstrated in the final model, the variables that remained associated with the outcome.

The research project was approved by the Ethics Committee in Research of the University of Pernambuco - CEP / UPE under protocol. 271/11.

RESULTS

The records of 1039 postpartum women undergoing vaginal birth were evaluated in this study. Based on the findings, the estimated occurrence episiotomy in the study sample was of 16% (IC95% 13.8% - 18.3%). For analysis of factors associated with use of episiotomy factors, we divided the sample into two distinct groups called without episiotomy (n = 873) and with episiotomy (n = 166).

The average maternal age of participants in the group with episiotomy was of 20.4 ± 5.0 years, with a minimum of 12 and maximum of 40 years old, whereas in the group without episiotomy average was 24.2 ± 6.5 years old, ranging from 13 to 45 years old (p < 0.001). To analyze the association between maternal age and episiotomy, patients were characterized in adolescents (≤ 19) and adults (> 19).

It was found that 26% of adolescents underwent episiotomy counterbalance to adulthood, in which 11.2% had the procedure. Regarding the average gestational age, it was found that was 38.4 ± 2.0 weeks in the episiotomy group and 38 ± 4.3 weeks in the group without episiotomy, with no significant difference between groups (p = 0.66). As for parity, the women were divided into primiparous and multiparous, and we observed that 27.4% of first births performed episiotomy, as opposed to only 3.4% of multiparous.

In relation to diseases related to pregnancy was observed in groups with and without episiotomy respectively an estimated prevalence of 0.6% gestational diabetes (n = 1) and of 0.9% (n = 8), and with arterial hypertension 7.90% (n = 13) and of 9.9% (n = 86). There was no association between these variables and the use of episiotomy (p = 0.68; p = 0.41). Also there was not an association between the occurrence of episiotomy and variables observed (p = 0.67), marital status (p=0.51), education (p = 0.93) and race (p = 0.14).

Regarding the variables associated with episiotomy that showed statistical significance, it is highlighted parity, age, previous vaginal birth, oxytocin and meconium. In Table 1, we can visualize the distribution of related pre-natal period and variables associated with episiotomy.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Episiotomy</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes n(%)</td>
<td>No n(%)</td>
<td>RP</td>
<td>IC95%</td>
<td>P</td>
</tr>
<tr>
<td>Primiparous</td>
<td>149(27,40)</td>
<td>395(72,60)</td>
<td>10,60</td>
<td>6,31 - 17,82</td>
<td>&lt;0,001*</td>
</tr>
<tr>
<td>Teens</td>
<td>87(26,00)</td>
<td>247(74,00)</td>
<td>2,79</td>
<td>1,99 - 3,91</td>
<td>&lt;0,001*</td>
</tr>
<tr>
<td>Absence of previous vaginal birth</td>
<td>153(26,40)</td>
<td>426(73,60)</td>
<td>12,34</td>
<td>6,90 - 22,09</td>
<td>&lt;0,001*</td>
</tr>
<tr>
<td>Use of oxytocin</td>
<td>85(51,20)</td>
<td>302(49,80)</td>
<td>1,98</td>
<td>1,42 - 2,77</td>
<td>&lt;0,001*</td>
</tr>
<tr>
<td>Meconium **</td>
<td>33(20,00)</td>
<td>115(73,30)</td>
<td>1,62</td>
<td>1,06 - 2,50</td>
<td>0,02*</td>
</tr>
</tbody>
</table>

RP = ratio of prevalence; CI = confidence interval; * P 0.05 <; Chi-square test.

In the analysis of perinatal variables, it was considered the weight of the newborns underweight, with values less than 2.500 grams (n = 143) and macrosomic, greater than or equal to 4.000 grams (n = 38), no association was observed between this variable and episiotomy.

It was found that the performance of episiotomy was associated with lower Apgar scores in the first minute, but was not associated with the Apgar score at five minutes. Perinatal outcomes analyzed in this study can be seen in Table 2.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Yes n(%)</th>
<th>No n(%)</th>
<th>RP</th>
<th>IC95%</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low weight</td>
<td>15(78,9)</td>
<td>127(79,0)</td>
<td>0,99</td>
<td>0,31 - 3,19</td>
<td>0,99</td>
</tr>
<tr>
<td>Apgar 1st minute ≤ 7</td>
<td>56(34,6)</td>
<td>189(65,4)</td>
<td>1,85</td>
<td>1,28 - 2,65</td>
<td>&lt;0,001*</td>
</tr>
<tr>
<td>Apgar 5th minute ≤ 7**</td>
<td>10(6,2)</td>
<td>36(4,2)</td>
<td>1,49</td>
<td>0,72 - 3,06</td>
<td>0,27</td>
</tr>
</tbody>
</table>

*No record of information of 26 patients; RP = ratio of prevalence; CI = confidence interval; * P 0.05 <; Chi-square test.
After logistic regression analysis, the variables that remained associated with episiotomy were: use of oxytocin, no previous vaginal birth and low Apgar scores in the first minute, with a statistically significant constant (Table 3).


<table>
<thead>
<tr>
<th>Variables</th>
<th>CI 95%</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primiparous</td>
<td>2,518</td>
<td>0,917 - 6,916</td>
</tr>
<tr>
<td>Use of oxytocin</td>
<td>1,729</td>
<td>1,176 - 2,543</td>
</tr>
<tr>
<td>Absence of previous vaginal birth</td>
<td>5,506</td>
<td>1,804 - 16,807</td>
</tr>
<tr>
<td>Meconium</td>
<td>1,520</td>
<td>0,903 - 2,558</td>
</tr>
<tr>
<td>Apgar first minute ≤ 7</td>
<td>1,615</td>
<td>1,064 - 2,450</td>
</tr>
</tbody>
</table>

CI = confidence interval; * P < 0.05.

DISCUSSION

In this study the occurrence of episiotomy was of 16%, which is consistent with the parameters recommended by the WHO, which defines an admissible incidence between 10-30% of vaginal births.15 acceptable to WHO recommended levels results were also observed in a study conducted with 495 women undergoing vaginal birth in a maternity hospital in Recife-Pernambuco, which was recorded a prevalence of episiotomy of 29.1%.16

Although the values obtained in this study are in agreement with the parameters suggested by the literature, this pattern is not what is observed in the Brazilian reality, in which there are high rates of episiotomy. This fact can be observed in a study conducted in a public hospital of the Federal District, which found a prevalence of 50.5%17 of episiotomy and in a study conducted at the University Hospital of São Paulo found that rates of 60.7%18, considered very significant values above recommended.

The results of this study can probably be related to health policies implemented in the hospital, which are geared for humanized birth and have awareness of health professionals to practice selective episiotomy. Thus, this fact could justify the index found in the rate of episiotomy, since obtaining an ideal parameter would be directly related to the welfare changes and awareness of the Staff.16

Regarding the use of episiotomy and maternal variables, it was found that primiparous are ten times more likely to be undergoing episiotomy than multiparous; however, the association of this variable did not remain significant in the multivariate analysis. In a study of doctors and nurses of the University Hospital of the University of São Paulo, which aimed to determine the frequency and the criteria adopted to indicate the episiotomy, found that his job was performed in 76.2% of normal births, she was practiced in 95.2% of their first pregnancy. The most common criteria for appointing professionals were cited by perineal rigidity, primiparity, fetal macrosomia and prematurity.19

As observed in other studies4-7,19, it can be observed in the present study that even with its low rate of episiotomy was associated with greater employment and primiparous women aged greater, verifying that adolescents have nearly three times more chance of undergoing such a procedure. Although these variables have not remained significant in multivariate analysis, it is believed that this condition brings up the point that even without support; this specific indication of routine episiotomy cases becomes a persistent practice.19

The use of episiotomy at first birth significantly increases the risk of subsequent births in women suffering lacerations20 and to undergo episiotomy again.21 It is suggested that factors associated, parity and episiotomy could be explained by the anatomical immaturity and the greater difficulty of adolescents in dealing with labor.7,22

The presence of vaginal birth was considered a risk factor even after multivariate analysis, ie, this variable was considered a protective factor for the practice of episiotomy. In this sense, women with one or more previous vaginal births were more likely to stay with intact perineum. Corroborating the results found in this research, a study in general hospital of Itapecerica da Serra, São Paulo, with 6.365 births, found that the greater the number of births, the less chance of episiotomy occurs, there being three times more likely than women never had a previous vaginal births undergoing such a procedure.23

As the variables of antepartum period as gestational age, birth-related (hypertensive disorders and gestational diabetes) diseases and socio-demographic variables occupation, marital status, education and race, there were no associations found when compared with episiotomy. Also no association between episiotomy and birth weight was observed. Theoretically, the occurrence of births of macrosomic fetuses would be more prone to
the use of episiotomy,7 however, it is believed that the results found in this study may have been due to the low frequency of this variable in the files.

Regarding Apgar scores there was an association between performing episiotomy and present lower values in the first minute of life, with significance in the multivariate analysis. Moreover, were found nearly twice as likely to occur in episiotomy newborns with lower Apgar index, corroborating the data of other authors23 who found similar results in a greater chance of performing episiotomies and deliveries of babies born depressed.

An association was observed between the presence of meconium and practice of episiotomy, however, this variable did not remain in the multivariate analysis. However, there was an association even after multivariate analysis between episiotomy and oxytocin use, and noted that its use increases nearly twice the chance of women undergoing episiotomy. Divergent data found in other studies16 that do not find an association between these variables, however, the authors caution that the use of oxytocin may be associated with prolonged labor, so labor, it is believed that this fact can justify the chance of this variable is considered a risk factor.

Some limitations should be made in relation to this study, such as lack of information regarding the type of provider of care, since deliveries conducted by midwives, nurses are less likely to interventions, including episiotomy.24 In this sense, it is believed that the low values found episiotomy may have been influenced by increased deliveries by these professionals evaluated in hospital. There are also other limitations that are inherent to the type of study and are related to the use of data from secondary sources, thus some additional information such as indices of pain, prevalence and degree lacerations and late complications related to the use of episiotomy such as: presence of sexual dysfunction, urinar and fecal incontinence and interference with quality of life could not be assessed, and therefore suggested future studies that seek to evaluate the association of these variables with the practice of episiotomy.

CONCLUSION

The occurrence of episiotomy was low, with significant association, even after multivariate analysis, between the practice of episiotomy and variables: absence of vaginal delivery, use of oxytocin and lower Apgar scores in the first minute of life.

It is hoped that data from this study can reinforce the importance of adding evidence-based practices in health care of women in pregnancy and childbirth. So, it appears to be essential that professionals working in maternity care have knowledge about the effects of episiotomy, thus avoiding the occurrence of unnecessary procedures that may cause maternal morbidity.

REFERENCES

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