

Episiotomy rate in Vietnamese-born women in Australia: support for a change in obstetric practice in Viet Nam

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Objective To describe the use of episiotomy among Vietnamese-born women in Australia, including risk factors for, and pregnancy outcomes associated with, episiotomy.

Methods This population-based, retrospective cohort study included data on 598 305 singleton, term (i.e. ≥ 37 weeks' gestation) and vertex-presenting vaginal births between 2001 and 2010. Data were obtained from linked, validated, population-level birth and hospitalization data sets. Contingency tables and multivariate analysis were used to compare risk factors and pregnancy outcomes in women who did or did not have an episiotomy.

Findings The episiotomy rate in 12 208 Vietnamese-born women was 29.9%, compared with 15.1% in Australian-born women. Among Vietnamese-born women, those who had an episiotomy were significantly more likely than those who did not to be primiparous, give birth in a private hospital, have induced labour or undergo instrumental delivery. In these women, having an episiotomy was associated with postpartum haemorrhage (adjusted odds ratio, aOR: 1.26; 95% confidence interval, CI: 1.08–1.46) and postnatal hospitalization for more than 4 days (aOR: 1.14; 95% CI: 1.00–1.29). Among multiparous women only, episiotomy was positively associated with a third- or fourth-degree perineal tear (aOR: 2.00; 95% CI: 1.31–3.06); in contrast, among primiparous women the association was negative (aOR: 0.47; 95% CI: 0.37–0.60).

Conclusion Episiotomy was performed in far fewer Vietnamese-born women giving birth in Australia than in Viet Nam, where more than 85% undergo the procedure, and was not associated with adverse outcomes. A lower episiotomy rate should be achievable in Viet Nam.

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Introduction

Episiotomy, which involves surgical incision to increase the diameter of the vaginal outlet to facilitate a baby's birth, is one of the most common medical procedures experienced by women throughout the world.¹ Internationally, there is a wide variation in episiotomy practice, ranging from routine use in all births to use only when clinically indicated (i.e. restrictive or selective use).^{1,2} A systematic review of randomized controlled trials showed that restrictive episiotomy has several advantages over routine episiotomy: less posterior perineal trauma, less suturing and fewer healing complications.¹ Although the restrictive approach was associated with an increased risk of anterior perineal trauma, there was no difference between the two approaches in severe vaginal or perineal trauma or in most pain measures. As a result, the World Health Organization recommended that episiotomy be performed only for a strictly limited number of indications.³ Nevertheless, the procedure is still used routinely in Viet Nam, although the reason for this is unclear. As in many but not all Asian countries, over 85% of Vietnamese women who give birth vaginally, including almost 100% of primiparae, have an episiotomy.^{4–6} Since none of the randomized trials on episiotomy involved Asian women,¹ Vietnamese clinicians question whether the results of these trials are generalizable to Vietnamese women.

We hypothesized that a study of episiotomy among Vietnamese women would help Vietnamese clinicians make informed decisions about clinical practice and, thereby, achieve the best pregnancy outcomes. The availability of population-based data in Australia provided an opportunity

to examine this issue. Australia has a multicultural population and Viet Nam is the fifth most common country of birth for women having babies in Australia.⁷ Furthermore, episiotomy is used on a restricted basis in the country.^{8,9} Therefore, the aim of this study was to describe the use of episiotomy among Vietnamese-born women giving birth in Australia. Specific objectives were to examine both risk factors for, and pregnancy outcomes associated with, episiotomy.

Methods

This population-based, retrospective cohort study included all births in the Australian state of New South Wales between 1 January 2001 and 31 December 2010 that were singleton, took place at full term (i.e. at 37 weeks' gestation or more) and involved vaginal delivery of a fetus with a vertex presentation. New South Wales is the most populous Australian state and contains approximately one third of the country's population. Data were obtained from two linked, validated population health data sets: the New South Wales Perinatal Data Collection and the New South Wales Admitted Patients Data Collection. The Perinatal Data Collection, whose contents are hereafter referred to as "birth records", is a statutory, population-based surveillance system containing routinely collected perinatal data that include information on all births taking place at 20 weeks' gestation or more or resulting in a baby that weighs at least 400 g. Information on maternal characteristics, pregnancy, labour, delivery and infant outcomes were collected using a standardized data collection form with check boxes that are completed by the attending midwife or doctor.

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The Admitted Patients Data Collection, whose contents are hereafter referred to as “hospital records”, is a census of all inpatient discharges from both public and private hospitals in New South Wales. For each hospitalized patient, diagnoses and procedures are coded from medical records using the Australian modification of the *International statistical classification of diseases and related health problems, tenth revision*, and the affiliated Australian classification of health interventions.¹⁰

As Australia does not have a unique registration number for citizens, the separate data sets were linked using probabilistic linkage methods by the Centre for Health Record Linkage.^{11,12} This process involves blocking and matching combinations of selected variables, such as name, date of birth, address and hospital, and assigning a probability weight to the match. Linkage was performed independently of the research. The Centre for Health Record Linkage undertakes quality assurance for any data linkage and assesses linkage quality by manually reviewing personal identifiers for a sample of the records analysed for linkage.¹² For this project, the reported linkage quality was less than 1 missed link per 1000 and less than 3 false-positive links per 1000. Researchers were provided with anonymized data. Approval for the record linkage and analysis for this study was obtained from the New South Wales Population Health and Health Services Research Ethics Committee.

Explanatory and outcome variables were prespecified and defined according to the data available in the two data sets and data that had been assessed in previous validation studies.^{13–16} Episiotomy was treated both as an outcome variable for factors associated with episiotomy use and as an exposure variable for third- or fourth-degree perineal tears, postpartum haemorrhage and prolonged postnatal hospitalization. A third-degree perineal tear is defined as partial or complete disruption of the anal sphincter muscles, which may involve either the external or internal anal sphincter muscles or both, and a fourth-degree tear, as disruption of the anal sphincter muscles involving a breach of the rectal mucosa. Episiotomy use was identified from birth or hospital records, with an ascertainment rate of 91% and a positive predictive value of 98%.¹⁵ The occurrence of third- or fourth-degree

perineal tears was identified from either diagnostic or procedural (i.e. repair) codes in hospital records (ascertainment rate: 94%, positive predictive value: 100%),¹⁵ as was the occurrence of postpartum haemorrhage (ascertainment rate: 74%, positive predictive value: 84%).¹⁶ The length of the mother's hospital stay after birth was defined as the number of days between the date of the baby's birth and the discharge date and prolonged hospitalization was considered to be any stay longer than 4 days.

Information about the mother's country of birth (i.e. Viet Nam or Australia) and about the explanatory variables of tobacco smoking, type of obstetric care (i.e. public or private) and maternal hypertension were obtained from either birth or hospital records.^{14,16} Data on the presence of diabetes were obtained from hospital records alone.¹³ Birth records alone provided details of other explanatory variables, including: maternal age; parity; rural or urban residence; initiation of antenatal care by 12 weeks' gestation; onset of labour (i.e. spontaneous or induced); epidural analgesia, including combined spinal and epidural anaesthesia; instrumental birth involving forceps or vacuum suction; and birth weight (i.e. <3800 or \geq 3800 g). Among Vietnamese-born women giving birth in Australia, a birth weight of 3800 g equates to approximately the 90th birth weight percentile for babies born at full term. In Viet Nam, this birth weight equates to the 95th percentile. In the absence of information on fetal distress, which is a potential explanatory factor for episiotomy, we used an Apgar score of less than 4 one minute after birth.

Statistical analysis

The analysis was conducted in three stages. First, we compared episiotomy rates and trends in Vietnamese-born and Australian-born women. Second, we assessed explanatory factors for episiotomy. Finally, we explored the association between episiotomy and the outcomes of postpartum haemorrhage, prolonged hospitalization and third- or fourth-degree perineal tears. Explanatory factors for episiotomy were examined using contingency table and multivariate logistic regression analysis. Multivariate logistic regression was also used to examine associations between episiotomy and the outcomes of postpartum haemorrhage, prolonged hos-

pitalization and third- or fourth-degree perineal tears. Since the association between episiotomy and third- or fourth-degree perineal tears was influenced by parity, primiparous and multiparous women were modelled separately. All potential explanatory factors suggested by univariate analysis and possible confounders were included in the multivariate adjusted models. Less than 0.1% of data were missing for any variable and records with missing data were excluded from all logistic regression models. The results of logistic regression analysis are presented as odds ratios (ORs) and 95% confidence intervals (95% CIs). All analyses were carried out using SAS 9.1 (SAS Institute Inc., Cary, United States of America).

Results

Between 2001 and 2010, there were 598 305 vaginal births of single, vertex-presenting infants at term among women of all ethnicities in New South Wales, including 100 910 women (16.9%) who had an episiotomy. The rate of episiotomy among Australian-born women was 15.1% (i.e. 62 349 of 413 047 women), compared with 29.9% (i.e. 3646 of 12 208 women) among Vietnamese-born women ($P < 0.0001$). The rate differed by parity in both groups: in Australian-born women, it was 27% among primiparae and 7% among multiparae; in Vietnamese-born women, the corresponding rates in the two groups were 48% and 17%, respectively.

Table 1 lists the maternal and labour factors associated with the performance of an episiotomy among Vietnamese-born mothers. Multivariate analyses showed that a woman who had an episiotomy was more likely than one who did not to be primiparous, to have received private obstetric care and to have had an induced labour or a forceps- or vacuum-assisted delivery. Living in a rural locality and being a smoker during pregnancy were associated with a decreased likelihood of an episiotomy. Although epidural analgesia was associated with episiotomy in the univariate analysis (data not shown), the relationship was confounded by instrumental birth and private care, and epidural analgesia was not independently associated with episiotomy in the multivariate analysis. A birth weight of 3800 g or more was not associated with episiotomy and increasing the birth weight cut-off did

Table 1. Factors associated with episiotomy in Vietnamese-born women, New South Wales, Australia, 2001–2010

Factor	No. (%) of women who had an episiotomy (n = 3646)	No. (%) of women who did not have an episiotomy (n = 8562)	Risk of episiotomy, aOR (95% CI) ^{a,b}
Maternal age ≥ 35 years	638 (17.5)	1721 (20.1)	1.09 (0.97–1.23)
Parity			
Primiparous	2391 (65.6)	2601 (30.4)	3.36 (3.06–3.69)
Multiparous	1255 (34.4)	5961 (69.6)	1.00 (NA) ^c
Rural residence	71 (2.0)	233 (2.7)	0.60 (0.45–0.82)
Type of health care			
Public	2568 (70.4)	7344 (85.8)	1.00 (NA) ^c
Private	1078 (29.6)	1218 (14.2)	2.07 (1.85–2.32)
Diabetes ^d	447 (12.3)	1040 (12.2)	1.02 (0.89–1.17)
Hypertensive disorders of pregnancy ^e	125 (3.4)	188 (2.2)	1.04 (0.77–1.36)
Smoker during pregnancy	76 (2.1)	240 (2.8)	0.63 (0.47–0.85)
Induction (versus spontaneous labour)	751 (20.6)	1129 (13.2)	1.26 (1.12–1.42)
Antenatal visit by week 12 of gestation	1741 (48.5)	3562 (42.1)	1.03 (0.94–1.13)
Epidural analgesia	557 (15.3)	529 (6.2)	0.85 (0.73–1.00)
Mode of delivery			
Forceps	350 (9.6)	82 (1.0)	8.27 (6.36–10.77)
Vacuum-assisted	914 (25.1)	478 (5.6)	3.87 (3.40–4.41)
Spontaneous vaginal birth	2382 (65.3)	8002 (93.5)	1.00 (NA) ^c
Birth weight ≥ 3800 g	303 (8.3)	711 (8.3)	1.12 (0.95–1.31)
Apgar score at 1 min < 4	56 (1.5)	104 (1.2)	0.96 (0.66–1.41)

aOR, adjusted odds ratio; CI, confidence interval; NA, not applicable.

^a All factors listed in the table were taken into account for the calculation of the aOR.

^b The reference group comprises women without the relevant characteristic, unless otherwise stated.

^c Reference group.

^d Diabetes includes pre-existing and gestational diabetes.

^e Hypertensive disorders of pregnancy include chronic hypertension, gestational hypertension, pre-eclampsia and eclampsia.

Table 2. Perinatal outcomes in Vietnamese-born women, by episiotomy, New South Wales, Australia, 2001–2010

Perinatal outcome	No. (%) of women who had an episiotomy (n = 3646)	No. (%) of women who did not have an episiotomy (n = 8562)	Risk of adverse perinatal outcome	
			cOR (95% CI)	aOR (95% CI) ^a
Postpartum haemorrhage	387 (10.6)	635 (7.4)	1.48 (1.30–1.69)	1.26 (1.08–1.46)
Postnatal hospitalization for > 4 days	822 (22.6)	908 (10.6)	2.45 (2.21–2.72)	1.14 (1.00–1.29)
Third- or fourth-degree perineal tear				
Primiparae	146 (6.1)	233 (9.0)	0.66 (0.53–0.82)	0.47 (0.37–0.60)
Multiparae	40 (3.2)	77 (1.3)	2.52 (1.71–3.70)	2.00 (1.31–3.06)

aOR, adjusted odds ratio; CI, confidence interval; cOR, crude odds ratio.

^a The following factors were taken into account for the calculation of the aOR: maternal age, parity (for postpartum haemorrhage and postnatal hospitalization), private or public care, diabetes, hypertension, induction of labour, epidural analgesia, mode of delivery and birth weight.

not change this finding. Only 380 (3.3%) Vietnamese-born women had infants that weighed 4000 g or more, including 28 (0.2%) who had infants weighing 4500 g or more.

The overall rate of postpartum haemorrhage, a hospital stay longer than 4 days and third- or fourth-degree perineal tears among Vietnamese-born mothers was 8.4%, 14.2% and 4.1%, respectively. The postpartum haemorrhage rate was greater in women who had an episiotomy than in those who did not

(10.6% versus 7.4%, respectively), as was the rate of prolonged hospitalization (22.6% versus 10.6%, respectively). Among multiparous women, episiotomy was associated with third- or fourth-degree perineal tears: the rate was 3.2% in women who had an episiotomy and 1.3% in those who did not (Table 2). In contrast, among primiparous women, 6.1% of those who had an episiotomy had a third- or fourth-degree perineal tear compared with 9.0% of those who did not have an episiotomy. This reduc-

tion in risk among primiparous women persisted after adjustment for other explanatory factors for third- or fourth-degree perineal tears (Table 2).

Discussion

This study shows that episiotomy was performed twice as often in Vietnamese-born women living in Australia than in Australian-born women: the episiotomy rate was approximately 30% in Vietnamese-born women and 15% in

Australian-born women. Nevertheless, the rate in Vietnamese-born women was markedly lower than that in Viet Nam. In Australia, where the use of episiotomy is restricted, episiotomy among Vietnamese women was associated with an increased risk of postpartum haemorrhage and of prolonged hospitalization and, in primiparous women only, with a decreased risk of a third- or fourth-degree perineal tear. If these findings are generalizable to Vietnamese women giving birth in Viet Nam, a reduction in the episiotomy rate in that country may be achieved without increasing the number of adverse outcomes.

The factors that influence decision-making around episiotomy in an environment where use of the procedure is restricted may be related to preconceptions about high-risk subgroups, in addition to clinical indicators or the risk of impending perineal trauma. It has been reported that Asian women are at an increased risk of both episiotomy and perineal trauma^{17–19} and that the risk remains elevated after adjustment for explanatory factors such as parity and instrumental delivery.^{17–19} Anecdotally, there is a perception that Asian women are more likely to experience severe perineal trauma because of physiological differences such as a shorter perineum.^{20–22} However, this perception is not supported by a study from Hong Kong Special Administrative Region, China, that involved measuring the perineal length during labour.⁴ Lai et al. reported that the mean \pm standard deviation perineal length of Chinese women was 38.8 ± 7.9 mm, which was comparable to the perineal lengths found using similar methods in other countries, including Israel (mean \pm standard deviation: 40.2 ± 10.7 mm), Turkey (mean \pm standard deviation: 36.6 ± 5.2 mm) and the United States of America (mean \pm standard deviation: 39 ± 7.0 mm).^{4,20,23,24} However, this does not rule out the possibility that there are other ethnic differences in the functional and morphological characteristics of the pelvic floor.^{25,26}

The explanatory factors for episiotomy among Vietnamese-born women observed in our study (i.e. nulliparity, private obstetric care, induction of labour and instrumental delivery) are consistent with published risk factors.^{19,27–30} However, there was no association with an infant's birth weight exceeding the 90th percentile of 3800 g

in these women. In Caucasian populations, a birth weight of 4000 g or more has been identified as a predictive factor for episiotomy, as has a birth weight of 4500 g or more.^{27–29} Few infants of Vietnamese women reached these sizes and the few that did were no more likely to be born with the aid of an episiotomy than smaller infants. Similarly, an Apgar score less than 4 one minute after birth was not an independent explanatory factor for episiotomy, which suggests that fetal distress was unlikely to have had a major influence on the use of episiotomy in this population.

The relationship between episiotomy and severe perineal trauma was complex. Although the risk of a third- or fourth-degree perineal tear was associated with episiotomy, it was influenced by parity: the risk was decreased in primiparae and increased in multiparae. However, the burden of disease fell largely on primiparae: 78% of third- or fourth-degree perineal tears occurred among women having their first baby. As in our study, previous observational studies have reported that episiotomy is associated with fewer third- or fourth-degree perineal tears among primiparous women but not among multiparous women.^{31–34} In contrast, a systematic review of randomized trials of restrictive versus routine episiotomy showed a reduced risk of severe perineal trauma in both primiparae and multiparae, although the effect did not reach statistical significance among multiparae.¹ A key difference between observational and experimental studies is the selection of patients, which may explain the observed difference in the effect of episiotomy. In Australia, an effort is made to avoid episiotomy, especially among multiparae, in whom the procedure is used only when there is a high risk of a third- or fourth-degree perineal tear, the birth of a compromised fetus has to be accelerated or there is impending perineal trauma. In contrast, among primiparae, more episiotomies may be performed specifically to prevent perineal tears.⁸

Our population-based study benefitted from the availability of reliably collected, labour and delivery data.^{13–16} However, these data did not include detailed clinical information on the type of episiotomy performed, other clinical risk factors (e.g. the duration of the second stage of labour), the accoucheur or the outcomes of perineal pain and

dyspareunia. Furthermore, Vietnamese-born women giving birth in Australia may differ from those giving birth in Viet Nam and obstetric practice in the two countries is likely to be different; both of these factors may restrict the generalizability of our findings to Viet Nam. Nevertheless, our study suggests that a much lower episiotomy rate can be achieved in Vietnamese and other Asian women without increasing the number of adverse outcomes.

We hope that the results of this study will be helpful in bringing about a change in obstetric practice in Viet Nam. A maternity hospital in Hong Kong SAR reported successfully decreasing the episiotomy rate from 73% in 2003 to 27% in 2008 without increasing the rate of third- or fourth-degree perineal tears.⁴ However, the strategies implemented to achieve this outcome were not reported. Similarly a randomized controlled trial of a multifaceted intervention in South America reduced the episiotomy rate from 41% to 30%;³⁵ in this trial, the intervention included: the involvement of selected opinion leaders; interactive workshops; skills training in the use of episiotomy for birth attendants; individual evidence-based education on episiotomy for birth attendants by trained health-care professionals; reminders; and feedback. Other activities planned to facilitate practice change in Viet Nam to reduce the episiotomy rate include: an audit of current episiotomy practice and outcomes based on delivery room registration of the episiotomies that have been performed; a survey of maternity care providers' knowledge of and attitudes towards episiotomy; and an assessment of health service resources currently used (e.g. the number of staff skilled in conducting and repairing episiotomies, equipment costs and the length of hospitalization after episiotomy). This information will be used to develop a programme for improving practice. In conclusion, a more restrictive episiotomy policy for Vietnamese women may achieve the benefits seen in other populations without any increase in harm. ■

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ملخص

معدل بضع الفرج لدى النساء من مواليد فييت نام في أستراليا: الدعم من أجل تغيير في ممارسات التوليد في فييت نام الغرض وصف استخدام بضع الفرج بين النساء من مواليد فييت نام في أستراليا، بما في ذلك عوامل الاختطار الخاصة ببضع الفرج وحصائل الحمل المرتبطة به. الطريقة شملت الدراسة الأترابية الاستطلاعية المستندة إلى السكان بيانات عن 598305 طفلاً منفرداً ومدة الحمل (أي ≤ 37 أسبوعاً) والولادات المهبلية عن طريق المجيء القمي في الفترة من 2001 إلى 2010. وتم الحصول على بيانات من فئات البيانات المرتبطة والمعتمدة الخاصة بالإدخال إلى المستشفيات والولادات على صعيد السكان. واستخدمت جداول الطوارئ والتحليل متعدد المتغيرات لمقارنة عوامل الاختطار وحصائل الحمل لدى السيدات اللاتي أجري أو لم يجرى هن بضع الفرج. النتائج بلغ معدل بضع الفرج لدى 12208 امرأة من مواليد فييت نام 29.9٪، مقارنة بنسبة 15.1٪ لدى النساء من مواليد أستراليا. ومن بين النساء من مواليد فييت نام، كان من المرجح أكثر أن تكن النساء اللاتي أجري هن بضع الفرج عن اللاتي لم يجرى هن بضع الفرج حاملات للمرة الأولى أو يلدن في إحدى

المستشفيات الخاصة أو يلدن ولادة محرضة أو يلدن باستخدام الأدوات. وارتبط بضع الفرج لدى هؤلاء النساء بنزيف بعد الوضع (نسبة الاحتمال المصححة: 1.26؛ فاصل الثقة 95٪، من 1.08 إلى 1.46) والإدخال إلى المستشفى بعد الولادة لأكثر من أربعة أيام (نسبة الاحتمال المصححة: 1.14؛ فاصل الثقة 95٪، من 1.00 إلى 1.29). وارتبط بضع الفرج بين النساء اللاتي ولدن مرات متكررة فقط إيجابياً بتمزق العضلات العجانية من الدرجة الثالثة أو الرابعة (نسبة الاحتمال المصححة: 2.00؛ فاصل الثقة 95٪، من 1.31 إلى 3.06)؛ وعلى النقيض، كان الارتباط سلبياً بين السيدات الحاملات للمرة الأولى (نسبة الاحتمال المصححة: 0.47؛ فاصل الثقة 95٪، من 0.37 إلى 0.60). الاستنتاج قل إجراء بضع الفرج لدى السيدات من مواليد فييت نام اللاتي يلدن في أستراليا عن تلك اللاتي يلدن في فييت نام التي خضعت فيها أكثر من نشبة 85٪ لهذا الإجراء ولم يكن ذلك مرتبطاً بحصائل ضائرة. وينبغي تحقيق انخفاض في معدل بضع الفرج في فييت نام.

摘要

澳大利亚的越南出生女性会阴侧切术比率：对越南产科实践变革的支持

目的 描述澳大利亚的越南女人接受会阴侧切手术的情况，包括会阴切开术的风险因素和相关的妊娠结局。
方法 这项基于人群的回溯性队列研究包括2001年至2010年之间598305个单胎、足月（即37孕周）和头位阴道分娩的数据。数据来源于经链接、确证的群体水平出生和住院数据集。使用列联表和多变量分析比较接受和不接受会阴切开术的女性的风险因素及妊娠结局。
结果 较之生于澳大利亚的女性15.1%的手术比率，在12208名生于越南的女性中的会阴侧切手术比率为29.9%。在越南出生的女性中，较之不接受会阴切开术的患者，接受此手术的患者在私人医院进行分娩时更有可能引产或

接受器械助产。在这些女性中，会阴切开术与产后出血（调整后的优势比，aOR: 1.26; 95%置信区间，CI: 1.08 - 1.46）和4天以上的产后住院（aOR: 1.14; 95%置信区间: 1.00 - 1.29）相关。会阴切开术仅在经产妇中与三级或四级会阴撕裂（aOR: 2.00; 95%置信区间: 1.31 - 3.06）正相关；相反，在初产妇中，关系为负相关（aOR: 0.47; 95%置信区间: 0.37 - 0.60）。
结论 越南出生的产妇在越南的手术比率为85%，相比之下在澳大利亚进行分娩的越南产妇执行会阴切开术的情况少很多，且与不良结局并无相关。在越南应该可以实现更低的会阴切开手术比率。

Résumé

Taux d'épisiotomie des femmes nées au Viet Nam et accouchant Australie: soutenir un changement de la pratique obstétricale au Viet Nam

Objectif Décrire le recours à l'épisiotomie chez les femmes nées au Viet Nam et accouchant en Australie, y compris les facteurs de risque et les répercussions sur la grossesse associées à l'épisiotomie.

Méthodes Cette étude de cohorte rétrospective axée sur la population a inclus des données de 598 305 singletons nés par voie vaginale, à terme (à savoir ≥ 37 semaines) et en présentation céphalique entre 2001 et 2010. Ces données ont été obtenues à partir d'informations associées et validées sur les naissances au niveau de la population et les hospitalisations. Des tableaux de contingence et une analyse multicritères ont été utilisés pour comparer les facteurs de risque et l'aboutissement de la grossesse chez les femmes qui ont ou n'ont pas

subi d'épisiotomie.

Résultats Le taux d'épisiotomie chez 12 208 femmes nées au Viet Nam a été de 29,9%, par rapport à 15,1% chez les femmes nées en Australie. Parmi les femmes nées au Viet Nam, la probabilité d'être primipares, d'avoir accouché dans un hôpital privé, d'avoir induit le travail ou subi un accouchement par instruments était considérablement supérieure chez celles qui avaient subi une épisiotomie que chez celles qui n'en avaient pas subi. Chez ces femmes, l'épisiotomie a été associée à une hémorragie du post-partum (odds ratio ajusté, ORa: 1,26; intervalle de confiance IC à 95%: de 1,08 à 1,46) et à une hospitalisation postnatale pendant plus de 4 jours (ORa: 1,14; IC 95%: 1,00-1,29). Chez les femmes

multipares seulement, l'épisiotomie a été positivement associée à une déchirure périnéale du troisième ou quatrième degré (ORa: 2,00; IC 95%: 1,31 à 3,06); en revanche, chez les femmes primipares, l'association a été négative (ORa: 0,47; IC 95%: 0,37 à 0,60).

Conclusion L'épisiotomie a été réalisée chez beaucoup moins de

femmes nées au Viet Nam et accouchant en Australie que chez celles qui ont accouché au Viet Nam, où plus de 85% subissent la procédure, et elle n'a pas été associée à des résultats négatifs. Une baisse du taux d'épisiotomie devrait être possible au Viet Nam.

Резюме

Показатели эпизиотомии у рожденных во Вьетнаме женщин в Австралии: поддержка изменений в практике родовспоможения во Вьетнаме

Цель Описать применение эпизиотомии среди вьетнамских женщин в Австралии, включая факторы риска эпизиотомии и связанных с ней исходов беременности.

Методы Данное проспективное когортное исследование населения включало данные по 598 305 одноплодным беременностям, срокам (т.е. вынашивание ≥ 37 недель) и родоразрешениям при затылочном предлежании плода в период с 2001 г. по 2010 г. Данные были получены из объединенных, утвержденных наборов данных по рождению и госпитализации на национальном уровне. Для сопоставления факторов риска и исходов беременности у женщин, подвергшихся и не подвергшихся эпизиотомии, использовались таблицы статистической структуры изучаемой выборки и средства многофакторного анализа.

Результаты Показатель эпизиотомии у 12 208 рожденных во Вьетнаме женщин составил 29,9%, по сравнению с 15,1% у австралийских женщин. Из числа рожденных во Вьетнаме женщин вероятность проведения эпизиотомии была гораздо выше у первородящих женщин, чем у повторнородящих,

рожающих в частной больнице, при индуцированных родах или оперативном родовспоможении. У этих женщин проведение эпизиотомии было статистически связано с послеродовым кровотечением (скорректированный относительный риск, cOR: 1,26; 95% доверительный интервал, ДИ: 1,08–1,46) и послеродовой госпитализацией длительностью более четырех дней (cOR: 1,14; 95% ДИ: 1,00–1,29). Среди исключительно повторнородящих женщин эпизиотомия имела положительную статистическую связь с третьей и четвертой степенями разрыва промежности (cOR: 2,00; 95% ДИ: 1,31–3,06); для сравнения, среди первородящих женщин статистическая связь была отрицательной (cOR: 0,47; 95% ДИ: 0,37–0,60).

Вывод Эпизиотомия проводилась у гораздо меньшего числа рожденных во Вьетнаме женщин, рожающих в Австралии, чем во Вьетнаме, где более 85% женщин подвергаются данной процедуре, и не была связана с неблагоприятными исходами. Во Вьетнаме могут быть достигнуты показатели эпизиотомии, ниже наблюдающихся сейчас.

Resumen

La tasa de episiotomías en mujeres vietnamitas en Australia: apoyo para cambiar una práctica obstétrica en Viet Nam

Objetivo Describir el uso de la episiotomía entre mujeres vietnamitas en Australia, incluidos los factores de riesgo y los resultados en el embarazo asociados a esta.

Métodos Este estudio de cohortes retrospectivo basado en la población incluyó datos de 598 305 partos vaginales únicos, prematuros (esto es, ≥ 37 semanas de gestación) y en posición cefálica entre 2001 y 2010. Los datos se obtuvieron de conjuntos de datos de nacimientos y hospitalización asociados y validados a nivel de la población. Se utilizaron tablas de contingencia y análisis multivariados para comparar los factores de riesgo y los resultados de los embarazos entre las mujeres que tuvieron o no una episiotomía.

Resultados La tasa de episiotomías entre 12 208 mujeres vietnamitas fue del 29,9%, comparada con el 15,1% de las mujeres australianas. Entre las mujeres vietnamitas, aquellas que se habían sometido a una episiotomía tenían muchas más probabilidades de ser primíparas, dar a

luz en un hospital privado, tener un parto provocado o someterse a un parto instrumental. En estas mujeres, someterse a una episiotomía se asoció con hemorragias postparto (cociente de posibilidades ajustado, CPa: 1,26; intervalo de confianza del 95%, IC: 1,08–1,46) y hospitalización postnatal durante más de 4 días (CPa: 1,14; 95% IC: 1,00–1,29). La episiotomía se asoció de forma positiva con un desgarro perineal de tercer o cuarto grado solo entre las mujeres múltiparas (CPa: 2,00; 95% IC: 1,31–3,06); mientras que dicha asociación fue negativa entre las mujeres primíparas (CPa: 0,47; 95% IC: 0,37–0,60).

Conclusión La incidencia de la episiotomía en mujeres vietnamitas que dieron a luz en Australia fue mucho menor que en Viet Nam, donde más del 85% se somete a este procedimiento, y no estuvo asociada a resultados adversos. Debería ser posible alcanzar una tasa de episiotomía menor en Viet Nam.

References

- Carroli G, Mignini L. Episiotomy for vaginal birth. *Cochrane Database Syst Rev* 2009. CD000081. doi: <http://dx.doi.org/10.1002/14651858.CD000081.pub2> PMID:19160176
- Graham ID, Carroli G, Davies C, Medves JM. Episiotomy rates around the world: an update. *Birth* 2005;32:219–23. doi: <http://dx.doi.org/10.1111/j.0730-7659.2005.00373.x> PMID:16128977
- Liljestrand J. *Episiotomy for vaginal birth: RHL commentary* (last revised: 20 October 2003). Geneva: World Health Organization Reproductive Health Library; 2003. Available from: http://apps.who.int/rhl/pregnancy_childbirth/childbirth/2nd_stage/jlcom/en/index.html [accessed 20 February 2013].
- Lai CY, Cheung HW, Hsi Lao TT, Lau TK, Leung TY. Is the policy of restrictive episiotomy generalisable? A prospective observational study. *J Matern Fetal Neonatal Med* 2009;22:1116–21. doi: <http://dx.doi.org/10.3109/14767050902994820> PMID:19916709
- Lam KW, Wong HS, Pun TC. The practice of episiotomy in public hospitals in Hong Kong. *Hong Kong Med J* 2006;12:94–8.
- Laopaiboon M, Lumbiganon P, McDonald SJ, Henderson-Smart DJ, Green S, Crowther CA; SEA-ORCHID Study Group. Use of evidence-based practices in pregnancy and childbirth: South East Asia Optimising Reproductive and Child Health in Developing Countries project. *PLoS One* 2008;3:e2646. doi: <http://dx.doi.org/10.1371/journal.pone.0002646> PMID:18612381

7. *New South Wales mothers and babies report 2009*. Sydney: New South Wales Ministry of Health; 2010. Available from: http://www0.health.nsw.gov.au/pubs/2011/pdf/mothers_babies_2009.pdf [accessed 31 January 2013].
8. *C-Obs 31. Routine intrapartum care in the absence of pregnancy complications. College statement 2011*. Victoria: Royal Australian and New Zealand College of Obstetricians and Gynaecologists; 2011. Available from: http://www.ranzcog.edu.au/component/docman/doc_view/964-c-obs-31-routine-intrapartum-care-in-the-absence-of-pregnancy-complications.html?Itemid=1127 [accessed 31 January 2013].
9. Roberts CL, Todd AL, Algert CS. Using routinely collected perinatal data to monitor evidence-based obstetric practice: restrictive use of episiotomy. *Australasian Epidemiol* 2003;10:10–4.
10. *International statistical classification of diseases and related health problems, tenth revision*. Geneva: World Health Organization; 2010. Available from: <http://www.who.int/classifications/icd/en/> [accessed 20 March 2013]. doi: <http://dx.doi.org/http://www.who.int/classifications/icd/en/>
11. Bentley JP, Ford JB, Taylor LK, Irvine KA, Roberts CL. Investigating linkage rates among probabilistically linked birth and hospitalization records. *BMC Med Res Methodol* 2012;12:149. doi: <http://dx.doi.org/10.1186/1471-2288-12-149> PMID:23009079
12. Centre for Health Record Linkage [Internet]. NSW, Australia. Eveleigh: CHRL; 2013. Available from: <http://www.cherel.org.au/> [accessed 31 January 2013].
13. Bell JC, Ford JB, Cameron CA, Roberts CL. The accuracy of population health data for monitoring trends and outcomes among women with diabetes in pregnancy. *Diabetes Res Clin Pract* 2008;81:105–9. doi: <http://dx.doi.org/10.1016/j.diabres.2008.03.001> PMID:18420301
14. Roberts CL, Bell JC, Ford JB, Hadfield RM, Algert CS, Morris JM. The accuracy of reporting of the hypertensive disorders of pregnancy in population health data. *Hypertens Pregnancy* 2008;27:285–97. doi: <http://dx.doi.org/10.1080/10641950701826695> PMID:18696357
15. Roberts CL, Bell JC, Ford JB, Morris JM. Monitoring the quality of maternity care: how well are labour and delivery events reported in population health data? *Paediatr Perinat Epidemiol* 2009;23:144–52. doi: <http://dx.doi.org/10.1111/j.1365-3016.2008.00980.x> PMID:19159400
16. Taylor LK, Travis S, Pym M, Olive E, Henderson-Smart DJ. How useful are hospital morbidity data for monitoring conditions occurring in the perinatal period? *Aust N Z J Obstet Gynaecol* 2005;45:36–41. doi: <http://dx.doi.org/10.1111/j.1479-828X.2005.00339.x> PMID:15730363
17. Goldberg J, Hyslop T, Tolosa JE, Sultana C. Racial differences in severe perineal lacerations after vaginal delivery. *Am J Obstet Gynecol* 2003;188:1063–7. doi: <http://dx.doi.org/10.1067/mob.2003.251> PMID:12712111
18. Hopkins LM, Caughey AB, Glidden DV, Laros RK Jr. Racial/ethnic differences in perineal, vaginal and cervical lacerations. *Am J Obstet Gynecol* 2005;193:455–9. doi: <http://dx.doi.org/10.1016/j.ajog.2004.12.007> PMID:16098870
19. Dahlen H, Homer C. Perineal trauma and postpartum perineal morbidity in Asian and non-Asian primiparous women giving birth in Australia. *J Obstet Gynecol Neonatal Nurs* 2008;37:455–63. doi: <http://dx.doi.org/10.1111/j.1552-6909.2008.00259.x> PMID:18754983
20. Deering SH, Carlson N, Stitely M, Allaire AD, Satin AJ. Perineal body length and lacerations at delivery. *J Reprod Med* 2004;49:306–10. PMID:15134158
21. Rizk DE, Thomas L. Relationship between the length of the perineum and position of the anus and vaginal delivery in primigravidae. *Int Urogynecol J Pelvic Floor Dysfunct* 2000;11:79–83. doi: <http://dx.doi.org/10.1007/s001920050074> PMID:10805263
22. Dahlen HG, Ryan M, Homer CS, Cooke M. An Australian prospective cohort study of risk factors for severe perineal trauma during childbirth. *Midwifery* 2007;23:196–203. doi: <http://dx.doi.org/10.1016/j.midw.2006.04.004> PMID:17125892
23. Aytan H, Tapisiz OL, Tuncay G, Avsar FA. Severe perineal lacerations in nulliparous women and episiotomy type. *Eur J Obstet Gynecol Reprod Biol* 2005;121:46–50. doi: <http://dx.doi.org/10.1016/j.ejogrb.2004.10.013> PMID:15950361
24. Walfisch A, Hallak M, Harlev S, Mazor M, Shoham-Vardi I. Association of spontaneous perineal stretching during delivery with perineal lacerations. *J Reprod Med* 2005;50:23–8. PMID:15730169
25. Howard D, Delancey JOL, Tunn R, Ashton-Miller JA. Racial differences in the structure and function of the stress urinary continence mechanism. *Obstet Gynecol* 2000;95:713–7. doi: [http://dx.doi.org/10.1016/S0029-7844\(00\)00786-9](http://dx.doi.org/10.1016/S0029-7844(00)00786-9) PMID:10775735
26. Schwartz N, Seubert DE, Mierlak J, Arslan AA. Predictors of severe perineal lacerations in Chinese women. *J Perinat Med* 2009;37:109–13. doi: <http://dx.doi.org/10.1515/JPM.2009.035> PMID:19143577
27. Räisänen S, Vehviläinen-Julkunen K, Gissler M, Heinonen S. A population-based register study to determine indications for episiotomy in Finland. *Int J Gynaecol Obstet* 2011;115:26–30. doi: <http://dx.doi.org/10.1097/01.AOG.0000103997.83468.70> PMID:14704254
28. Howden NL, Weber AM, Meyn LA. Episiotomy use among residents and faculty compared with private practitioners. *Obstet Gynecol* 2004;103:114–8. doi: <http://dx.doi.org/10.1097/01.AOG.0000103997.83468.70> PMID:14704254
29. Hueston WJ. Factors associated with the use of episiotomy during vaginal delivery. *Obstet Gynecol* 1996;87:1001–5. doi: [http://dx.doi.org/10.1016/0029-7844\(96\)00068-3](http://dx.doi.org/10.1016/0029-7844(96)00068-3) PMID:8649679
30. Allen RE, Hanson RW Jr. Episiotomy in low-risk vaginal deliveries. *J Am Board Fam Pract* 2005;18:8–12. doi: <http://dx.doi.org/10.3122/jabfm.18.1.8> PMID:15709058
31. Poen AC, Felt-Bersma RJ, Dekker GA, Devillé W, Cuesta MA, Meuwissen SGM. Third degree obstetric perineal tears: risk factors and the preventive role of mediolateral episiotomy. *Br J Obstet Gynaecol* 1997;104:563–6. doi: <http://dx.doi.org/10.1111/j.1471-0528.1997.tb11533.x> PMID:9166198
32. Räisänen SH, Vehviläinen-Julkunen K, Gissler M, Heinonen S. Lateral episiotomy protects primiparous but not multiparous women from obstetric anal sphincter rupture. *Acta Obstet Gynecol Scand* 2009;88:1365–72. doi: <http://dx.doi.org/10.3109/00016340903295626> PMID:19852569
33. Shiono P, Klebanoff MA, Carey JC. Midline episiotomies: more harm than good? *Obstet Gynecol* 1990;75:765–70. PMID:2183106
34. Tincello DG, Williams A, Fowler GE, Adams EJ, Richmond DH, Alfirevic Z. Differences in episiotomy technique between midwives and doctors. *BJOG* 2003;110:1041–4. doi: <http://dx.doi.org/10.1111/j.1471-0528.2003.03030.x> PMID:14664873
35. Althabe F, Buekens P, Bergel E, Belizán JM, Campbell MK, Moss N et al.; Guidelines Trial Group. A behavioral intervention to improve obstetrical care. *N Engl J Med* 2008;358:1929–40. doi: <http://dx.doi.org/10.1056/NEJMsa071456> PMID:18450604