

Episiotomy is still performed routinely in Yemeni women

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ABSTRACT

الأهداف: معرفة معدل إجراء عملية شق العجان (خزغ المهبل) في النساء اللواتي لم يسبق لهن الولادة في مستشفى الثورة، صنعاء، اليمن ومعرفة علاقة هذه العملية بتمزق العجان.

الطريقة: قمنا بدراسة استرجاعية من خلال البيانات الخاصة بالمستشفى لعدد النساء اللواتي ولدن لأول مرة وأجريت لهن عملية شق العجان والذين لم تجرى لهن هذه العملية وولدن ولادة تلقائية خلال الفترة من يناير إلى ديسمبر 2008م. وبعد ذلك قمنا بمراجعة الملفات الخاصة لأولئك النسوة واستخراج البيانات الضرورية لهن ومعرفة عدد النساء اللاتي أجريت لهن عملية شق العجان وعدد اللاتي لم تجر لهن العملية. وأيضاً، عدد اللاتي حصل لهن تمزقات في المجموعتين.

النتائج: ولد عدد 2588 امرأة لأول مرة خلال فترة الدراسة. وكان من هؤلاء عدد 1944 تم إجراء عملية شق العجان لهن أثناء الولادة بمعدل (75.1%). وقد لوحظ أن 17 حالة (0.87%) تعرضن لتمزقات في العجان من المجموعة التي أجريت لهن العملية، بينما لوحظ أن 12 حالة (1.7%) تعرضن لنفس التمزقات في المجموعة التي لم تجر لهن العملية.

خاتمة: لازالت عملية شق العجان تمارس بمعدل مرتفع في المستشفى وصل إلى 75.1% وهذا المعدل لا يتناسب مع ما تم إثباته من خلال الطب المسند.

Objectives: To examine the rate of episiotomy use among nulliparous Yemeni women, and to evaluate its impact on perineal tears.

Methods: We retrospectively reviewed the delivery record for all nulliparous women with and without episiotomy and singleton spontaneous births at Al-Thawra General Hospital, Sana'a, Yemen between January and December 2008. The women's charts were retrieved, and the demographic characteristics were obtained. For women with episiotomy, the indication and type of incision were noted. The rate of the procedure and the perineal tears was recorded, and compared between women with and without episiotomy.

Results: A total of 2588 nulliparous women had singleton spontaneous births. Out of these, 1944 (75.1%) women had an episiotomy. Most cases (96%) had a mediolateral incision. Seventeen episiotomy cases (0.87%) were complicated by second and third degree perineal tears versus 12 cases (1.7%) with the same type of tear in women without the procedure.

Conclusion: Episiotomy is still performed routinely in 75.1% of first-time births. This rate is higher than supported by the available evidence.

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An episiotomy is a surgical incision through the perineum made to enlarge the vagina and assist childbirth.¹ The incision can be performed downward towards the anus (midline), or at an angle from the posterior end of the vulva (mediolateral). It is a common surgical procedure performed worldwide. It is said that the only surgical procedure more frequently performed than episiotomy is cutting the umbilical cord.² Moreover, it is one of the only surgical procedures to be performed without the patient's specific consent.² Episiotomy started as far back as 1741 in Europe based on the deep-seated belief that surgical opening of the perineum could speed labor, and prevent severe perineal tears.³ However, it was not until Pomeroy wrote an article published in 1918⁴ followed by the influential paper introduced by the pioneering obstetrician Gabee and DeLee⁵ of Chicago-lying hospital in 1920 who promoted its routine use. They called for liberalization of episiotomy use.⁵ Unfortunately, they provided no evidence for this procedure other than his unsubstantiated opinion.⁶ Subsequently, many claimed advantages of episiotomy

have been added to the list including better future sexual function, and reducing the risk of urine and fecal incontinence among others.² Thus, it became a standard of obstetric practice, and the rate of episiotomy increased significantly, and is still persistently higher than supported by scientific studies.⁷ Several demographic variables have been shown to increase the episiotomy rate such as younger age, white race, and private insurance.⁷ Also, the preference of clinician, time of day and facility type, size and location, are reported to play a role in the rate of episiotomy.⁸ Clearly, the right rate has not been identified by scientific evidence, and is subject to change based on non-medical factors. The rate is affected by the preference of the providers and their beliefs, rather than by the physiology of vaginal birth.⁷ However, routine use of episiotomy for uncomplicated vaginal births has no benefits, and actually causes more complications. According to a review of scientific evidence,⁹ routine episiotomy did not achieve any of the goals it is commonly believed to achieve. Many relevant studies are consistent in demonstrating no benefit from episiotomy for prevention of fecal and urinary incontinence, or pelvic floor relaxation. Likewise, no evidence suggests that episiotomy reduces impaired sexual function, as pain with intercourse was more common among women with episiotomy. Moreover, women without episiotomy were found to have less pain with faster resolution, and no greater or lesser risk of wound healing complications.¹⁰ As the maternal benefit is not an indication,¹⁰ the benefits of not giving episiotomy could include: prevention of cutting of, or extension into the anal sphincter or rectum; avoidance of unsatisfactory anatomic results, such as skin tags, asymmetry, or excessive narrowing of the introitus, and rectovaginal or anal fistulas. Also, the risks of increased blood loss, hematoma, pain and edema, infection and dehiscence, and sexual dysfunction that might follow can be avoided.¹¹ We hypothesized that in our country episiotomy is still practiced routinely despite the large body of scientific evidence demonstrating its harm rather than benefits, and recommend restricted, rather than liberal use. The purpose of this study was to examine the rate of episiotomy use among nulliparous women in the largest public hospital in Yemen, and to evaluate its impact on perineal tears.

Methods. Data were extracted retrospectively from the delivery records for all women that gave birth in Al-Thawra General Hospital, Sana'a, Yemen between January and December 2008. This is the largest public hospital in Yemen, tertiary-level, and a university affiliated institution with approximately 12,000 deliveries per year. For all nulliparous women delivered at the hospital during the study period with and without

episiotomy, their charts were retrieved, and the following information was extracted: maternal age, gestational age, fetal presentation, presence of perineal tears, and birth weight. For women with episiotomy, the type and indication for incision were recorded. Women who had episiotomy performed for a premature baby (birth weight <2500 kg), macrosomia (birth weight ≥4000 g), multiple pregnancy, instrumental vaginal delivery, and other than vertex presentation were excluded from the study, as episiotomy is generally performed for these cases. The type of incision used in the hospital is mainly mediolateral. A midline incision is carried out rarely in some cases according to the preference of the delivering midwives. The episiotomy is mostly performed by the midwives, and to a lesser extent by physicians. Ethical approval to conduct this study was obtained from the local hospital committee.

The statistical analysis was carried out using the Statistical Package for Social Sciences (SPSS Inc, Chicago, IL, USA), version 10.0. Student t-test was used for continuous variables, X² test for categorical data and proportion was used when appropriate. A *p*-value of <0.05 was considered as statistically significant.

Results. A total of 12069 deliveries were recorded in the hospital during the study period. Of these, 9947 women (82.4%) delivered vaginally, and out these, there were 2588 nulliparous women with singleton spontaneous births. Of these, 1944 women had an episiotomy procedure, making the episiotomy rate among nulliparous women 75.1%. There were 1865 cases with mediolateral incision, and 79 cases with midline episiotomy. The episiotomy was not carried out for the remaining 644 nulliparous women. There were no significant differences in maternal age, gestational age, and birth weight between the women with and without episiotomy (Table 1). Among the 1944 women with episiotomy, posterior perineal tears (first, second, third degrees) were recorded in 17 cases

Table 1 - Demographic characteristics of the study and control groups.

Characteristics	Episiotomy (n=1944)	No episiotomy (n=644)	<i>P</i> -value
Maternal age, years	26.43 ± 6.1	26.0 ± 5.36	0.1105
Gestational age, weeks	38.47 ± 1.2	38.5 ± 1.2	0.5825
Fetal presentation, n (%)			
Vertex	1944 (100.0)	644 (100.0)	
Birth weight in g, n (%)			
≥4000	156 (8.0)	39 (6.0)	
3000-3999	378 (70.9)	437 (67.9)	
<3000	410 (21.0)	168 (26.0)	
Type of episiotomy, n (%)			
Mediolateral	1865 (96.0)		
Midline	79 (4.0)		

Table 2 - Perineal tears in women with and without episiotomy, n (%).

Tears	Episiotomy		No episiotomy (n=644)
	Mediolateral (n=1865)	Midline (n=79)	
1st and 2nd degree	7 (0.37)	6 (7.6)	9 (1.3)
3rd degree	1 (0.05)	3 (3.7)	3 (0.46)
4th degree	-	-	-

For severe degree perineal tears, $p=0.4777$, Chi-square = 0.504

(0.9%). Of these, 4 cases (0.2%) were third degree. For the 644 women without episiotomy, perineal tears were recorded in 12 cases (1.7%). Three cases of these (25%) were third degree tears. The overall rate of severe (third-degree) tear was 0.2% in women with episiotomy versus 0.46% in women without, with a statistically significant difference ($p=0.4777$). The distribution of cases is summarized in **Table 2**.

Discussion. Our results showed that episiotomy was performed in 75.1% of nulliparous women at this hospital. This rate is significantly higher than supported by many trials.¹² However, there is no consensus on what constitutes an appropriate or ideal rate of episiotomy in otherwise, uncomplicated vaginal births.⁷ Different rates of episiotomy are not well explained by differences in the patient population, but are largely due to differences in providers, and their beliefs of the benefits of the procedure.⁷ It is self-evident that generally a high rate of the surgical procedure reflects its popularity and therefore, its attributable benefits. Nevertheless, episiotomy is an example of an obstetrical procedure that persists despite a total lack of evidence for it, and a considerable body of evidence against it.¹³

Hartmann et al¹⁰ conducted a systematic review in 2005 for the best evidence available on maternal outcomes of routine versus restrictive use of episiotomy, and found no benefits from the procedure. They called for reducing the episiotomy use to less than 15% of spontaneous vaginal births.¹⁰ However, questioning of the claimed benefits of the procedure started earlier when several studies evaluated whether the hypothesized benefits could really exist. In 1948, Kaltreider and Dixon¹⁴ reported a higher frequency of rectal lacerations with a median episiotomy, and questioned the efficacy of episiotomy as a preventive procedure. Kitzinger in the UK began questioning the routine use of episiotomy as early as 1972.¹⁵ Kitzinger carried out the critique because a large number of women had painful stitching and postpartum discomfort. In 1975, Chalmers also criticized the practice, as despite the increased use of episiotomy there was no corresponding decline in the rate of perineal tears.¹⁵

Recently, the episiotomy rates in the USA have decreased slowly but steadily over time, and some ascribed such a steep decline partly to the Hartmann article effect.¹⁶ It seems that while episiotomy use had extraordinarily increased after Gabee and DeLee's work (1920),⁵ the rates are slowly declining in response to available evidence-based recommendations. These changes, however, suggest that the procedure was practiced according to the historical beliefs, which could not withstand the scientific scrutiny. Of note, some of the obstetricians who published their textbooks have described the episiotomy as one step of the normal vaginal delivery process, and presented an extensive list of the indications that must be adhered to by attendants. This information therefore, has been received by medical students during conventional teaching as definitive data and thus, educated the episiotomy as a sound and essential step in vaginal birth. Research has continued to add new information, which must be regularly incorporated into these textbooks. All data regarding episiotomy needs to be extensively revised and rewritten. Unfortunately, these textbooks have never been updated, and their contents are still in the direct historical line with the work of Gabee and DeLee.⁵

We show in the present study that 644 of nulliparous women did not have the procedure despite the observed trend of performing episiotomy for first-time birthing women in the hospital. This however, could be explained by the probability that women arrived too late when the labor process was in the advanced stages, and the delivery followed smoothly and rapidly. In addition, the laboring physicians might not have preferred episiotomy for uncomplicated cases.

Our results revealed that nulliparous women with episiotomy had fewer perineal tears than those without. Though this finding agrees with other studies,¹⁷ a causal relationship could not be definitively established as the women in each group might differ in several preexisting characteristics, and also in several aspects of the second-stage management. These confounding factors could not be identified in a retrospective study.

The use of midline episiotomy has consistently been found to be the strongest risk factors for severe tear and sphincter involvement,¹⁸ whereas mediolateral incision has a lower frequency of this event.¹⁹ In the present study, there was no association between episiotomy use and any of the demographic characteristics of the women studied, which indicates that the episiotomies were performed routinely for first-time birthing women at the hospital. However, the study was conducted in a single hospital even with a large sample, and the rate reported could not be generalizable to the whole country, which is considered a limitation of the study.

In conclusion, episiotomy is still performed routinely for most nulliparous women in the hospital. It seems that the rate of the procedure is mostly performed routinely based on anecdotal evidence proven to be not as once thought, therefore, routine use is unjustified and should be limited to specific indications. Without strong evidence of its benefits, it is our professional task to convert the practice from traditional belief into a more sound one based on the best and most current evidence available. However, further studies are required to investigate fully the circumstances, in which the procedure should be considered indications.

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Ethical Consent

All manuscripts reporting the results of experimental investigations involving human subjects should include a statement confirming that informed consent was obtained from each subject or subject's guardian, after receiving approval of the experimental protocol by a local human ethics committee, or institutional review board. When reporting experiments on animals, authors should indicate whether the institutional and national guide for the care and use of laboratory animals was followed.