

# Midwives' Clinical Reasons for Performing Episiotomies in the Kurdistan Region Are they evidence-based?

Hamdia M. Ahmed

## الأسباب السريرية لإجراء عملية قص العجان من قبل القابلات في إقليم كردستان هل هي مستندة على الأدلة العلمية؟

حمديّة ميرخان أحمد

**ABSTRACT: Objectives:** An episiotomy is one of the most common obstetric surgical procedures and is performed mainly by midwives. The decision to perform an episiotomy depends on related clinical factors. This study aimed to find out midwives' reasons for performing episiotomies and to identify the relationship between these reasons and the demographic characteristics of the midwives. **Methods:** This cross-sectional study was conducted between 1<sup>st</sup> July and 30<sup>th</sup> September 2013 in three governmental maternity teaching hospitals in the three main cities of the Kurdistan Region of Iraq. All of the midwives who had worked in the delivery rooms of these hospitals for at least one year were invited to participate in the study (n = 53). Data were collected through interviews with midwives as well as via a questionnaire constructed for the purpose of the study. The questionnaire sought to determine: midwives' demographic characteristics; type of episiotomy performed; authority of the decision to perform the procedure, and reasons for performing episiotomies. **Results:** The main clinical reasons reported by midwives for performing an episiotomy were: macrosomia/large fetus (38, 71.7%), breech delivery (31, 58.5%), shoulder dystocia (29, 54.7%), anticipated perineal tear (27, 50.9%) and fetal distress (27, 50.9%). There was a significant association between the frequency of these reasons and midwives' total experience in delivery rooms as well as their levels of education. **Conclusion:** Most of the reasons given by the midwives for performing episiotomies were not evidence-based. Age, years of experience, specialties and level of education also had an effect on midwives' reasons for performing episiotomies.

**Keywords:** Episiotomy; Nurses; Midwives; Iraq.

**المخلص:** الهدف: إن عملية قص العجان هي من أكثر العمليات الجراحية انتشارا وتجرى عادة من قبل القابلات ويعتمد قرار إجراء العملية على الأسباب السريرية المتعلقة بذلك وتهدف هذه الدراسة إلى إيجاد أسباب إجراء عملية قص العجان من قبل القابلات والتعرف على العلاقة بين هذه الأسباب والصفات الديموغرافية للقابلات. **الطريقة:** أجريت دراسة مقطعية في الفترة مابين 07/01-2013/09/30 في ثلاث مستشفيات تعليمية حكومية للولادة في المدن الرئيسية الثلاث لإقليم كردستان في العراق. وشملت الدراسة جميع القابلات العاملات في صالات الولادة اللواتي لديهن خبرة لا تقل عن سنة واحدة في هذه المستشفيات (عدد = 53). وقد جمعت المعلومات عن طريق المحاوراة مع القابلات وكذلك عن طريق استمارات الاستبيان والتي تم إعدادها لهذا الغرض وقد احتوت الاستمارة على معلومات تتعلق بالخواص الديموغرافية للقابلات وأنواع عمليات قص العجان وصلاحيات اتخاذ القرار لإجراء هذه العمليات والأسباب الموجبة لإجرائها. **النتائج:** أظهرت نتائج الدراسة بأن الأسباب السريرية حول قرار إجراء عملية قص العجان كانت التالي: (38, 71.7%) لكبر حجم الجنين و(31, 58.5%) ولادة مقعدة و(29, 54.7%) صعوبة ولادة الكتف و(27, 50.9%) لمنع تمزق منطقة العجان و(27, 50.9%) بسبب كرب الجنين. وكانت هناك علاقة إيجابية بين الأسباب المذكورة أعلاه مع سنوات الخدمة في صالات الولادة والمستوى التعليمي للقابلات. **الخلاصة:** نستنتج من هذه الدراسة أن القابلات لم يجرين عملية قص العجان استنادا على الأدلة العلمية. وأن أهم العوامل التي أثرت على إجراء عمليات قص العجان هي العمر وسنوات الخبرة والاختصاص والمستوى التعليمي.

**مفتاح الكلمات:** قص العجان؛ ممرضات؛ قابلات؛ العراق.

### ADVANCES IN KNOWLEDGE

- This study provides baseline data for the first time on the clinical reasons of performing episiotomies among Kurdish midwives in northern Iraq.
- Knowing the clinical reasons for performing episiotomies and comparing them with evidence-based reasons may help in decreasing the rate of episiotomies and restricting their use.

### APPLICATION TO PATIENT CARE

- The results of this study may help to decrease the number of patients undergoing unnecessary episiotomies. Midwives' knowledge and practice regarding this procedure should be updated through the establishment of training courses and new policies.

- Evidence-based practice and national guidelines should be prepared for midwives in order to restrict the use of episiotomies and to decrease the rate of this procedure. It is recommended that these guidelines be created according to the recommendations of the World Health Organization.

**A**N EPISIOTOMY IS A SURGICAL INCISION of the perineum performed to increase the diameter of the vaginal outlet during childbirth.<sup>1</sup> Episiotomies are controversial and recent studies show that the common indications for performing this procedure are based on limited data.<sup>2</sup> In addition, there is a general underestimation of the potential adverse consequences of this procedure, including third- or fourth-degree tears due to extension of the incision, anal sphincter dysfunction and painful intercourse.<sup>2</sup> Other complications can include bleeding, infection, swelling, wound closure complications, localised pain and the possibility of short-term sexual dysfunction.<sup>1,3</sup>

Episiotomies increase perineal pain on the first postpartum day as well as perineal pain and wound-healing problems during the third postpartum week.<sup>4</sup> Routine episiotomies are unfortunately very common, both in under-resourced settings and in some developed countries.<sup>5</sup> They have been associated with an increased risk of severe perineal trauma and can also significantly increase the risk of anal sphincter tears rather than reducing this complication.<sup>6,7</sup> The incidence of anal sphincter injuries was shown to be higher in patients undergoing a routine episiotomy, compared to patients who underwent a selective episiotomy according to certain criteria, including the state of the perineum (normal or tight), the size of the baby and the length of the second stage of labour.<sup>9</sup> Indeed, the Cochrane Review article regarding episiotomies for vaginal birth showed that, compared with routine use, restrictive use of episiotomies resulted in less severe perineal trauma and suturing as well as fewer healing complications.<sup>8</sup>

In line with the best available evidence, the World Health Organization (WHO) has taken a clear stand against the routine use of episiotomies, recommending an average episiotomy rate of 10% for normal deliveries.<sup>1,10</sup> Clinical guidelines regarding intrapartum care recommend that episiotomies should only be performed if there is a clinical need, such as during an instrumental vaginal birth or in cases of suspected fetal compromise.<sup>11</sup>

Midwifery practice in Iraq suffers from the absence of up-to-date and evidenced-based clinical guidelines; there is no research-based information regarding midwifery practice, especially regarding episiotomies, which are one of the most common surgical procedures used in obstetric care. Almost all

*primigravida* women in maternity teaching hospitals in the Kurdistan Region have an episiotomy and *multigravida* women also routinely undergo an episiotomy to shorten the length of the second stage of labour. An analysis of the reasons behind the use of an episiotomy is an important step in the reduction of episiotomy rates.<sup>12</sup> Thus this study aimed to determine the clinical reasons why midwives working in delivery rooms performed episiotomies and whether these reasons matched with evidence and recent research findings. The specific objectives of the present study were to determine the midwives' clinical reasons for performing episiotomies, identify relationships between midwives' demographic characteristics and their reasons for performing episiotomies and to compare the midwives' clinical reasons for performing episiotomies between the three main cities in the Kurdistan Region.

## Methods

A cross-sectional study was conducted between 1<sup>st</sup> July and 30<sup>th</sup> September 2013 in the Kurdistan Region of Iraq. Kurdistan is an autonomous region of Iraq that consists of the three governorates of Erbil, Dohuk and Sulaymaniyah. The study was conducted in the biggest maternity teaching hospitals of these three governorates; these three hospitals provide comprehensive maternity care to the whole region.

The study population included all of the midwives working in the hospitals' delivery rooms. The midwives who had less than one year's experience of working in delivery rooms ( $n = 9$ ) were excluded from the study. All participants ( $n = 53$ ) had nursing or midwifery qualifications, but those qualifications differed between individuals. In Kurdistan, even though the primary and secondary nursing school has closed, older nurses with primary or secondary education in nursing are still practising. Currently, Erbil has one active secondary school of midwifery. In spite of these different qualifications, there is no difference between the job descriptions of midwives with nursing qualifications and those with midwifery qualifications. Therefore all participants in this study were referred to as "midwives".

The purpose of the study was explained to all participants during personal interviews and informed verbal consent was obtained. Data were collected

**Table 1:** Clinical reasons for performing episiotomies among midwives in three governorates in the Kurdistan Region (N = 53)

Clinical reasons	Total n (%)	Governorate n (%)			P value
		Hawler n = 17	Duhok n = 18	Sulaymaniyah n = 18	
<b>Maternal factors</b>					
Better healing	12 (22.6)	9 (52.9)	0 (0)	3 (16.7)	<0.001*
Anticipated perineal tear	27 (50.9)	11 (64.7)	3 (16.7)	13 (72.2)	0.001
Previous pelvic surgery	13 (24.5)	2 (11.8)	2 (11.1)	9 (50)	0.014
Poor maternal effort during labour	4 (7.5)	1 (5.9)	0 (0)	3 (16.7)	0.207
Thick or inelastic perineum	22 (41.5)	1 (5.9)	9 (50)	12 (66.7)	0.001
<b>Fetal factors</b>					
Fetal distress	27 (50.9)	16 (94.1)	6 (33.3)	5 (27.8)	<0.001
To decrease pressure on the fetal head	13 (24.5)	4 (23.5)	0 (0)	9 (50)	0.001*
Shoulder dystocia	29 (54.7)	14 (82.4)	0 (0)	15 (83.3)	<0.001
Shortening the second stage of labour	6 (11.3)	1 (5.9)	0 (0)	5 (27.8)	0.025*
Fetal malposition	10 (18.9)	2 (11.8)	1 (5.9)	7 (38.9)	0.047
Instrumental delivery	11 (20.8)	0 (0)	0 (0)	11 (61.1)	<0.001
Breech delivery	31 (58.5)	13 (76.5)	5 (27.8)	13 (72.2)	0.005
Macrosomia/large fetus	38 (71.7)	16 (94.1)	8 (44.4)	14 (77.8)	0.004
<b>Other factors</b>					
Routine due to primiparity	16 (30.2)	1 (5.9)	15 (83.3)	0 (0)	<0.001
Easier to repair for the physician	8 (15.1)	1 (5.9)	0 (0)	7 (38.9)	0.002*
By order of the physician	15 (28.3)	5 (29.4)	2 (11.8)	8 (44.4)	0.020*

\*Fisher's exact test was applied.

through interviews with the midwives. A three-part questionnaire was constructed for the purpose of the study and was also completed during the interviews. The questionnaire sought to determine the participants' demographic characteristics; their level and type of training; the type of episiotomy given; the authority of the decision to perform an episiotomy, and the midwives' reasons for performing episiotomies (an open-ended question). These reasons are referred to in this article as "clinical reasons". Only the five most frequent clinical reasons ( $\geq 50\%$ ) were selected for investigation of their relationship with midwives' demographic characteristics; these included the midwives' number of years of experience in the delivery room and their level of education.

Data were analysed using the Statistical Package for the Social Sciences (SPSS), Version 18 (IBM, Corp., Chicago, Illinois, USA). The F-test and Chi-squared test were also used for analysing data. A  $P$  value  $\leq 0.05$  was considered statistically significant and a  $P$  value  $\leq 0.01$  was considered highly significant.

This study was approved by the Directorate of Health of Erbil, Dohuk and Sulaymaniyah as well as the Scientific and Ethical Committees of the Nursing College of Hawler Medical University.

## Results

The mean age  $\pm$  standard deviation (SD) of the study sample was  $37.79 \pm 7.01$  years (range: 23–57 years). The mean number of years of experience in the delivery room  $\pm$  SD was  $13.66 \pm 9.25$ . A high percentage of the study participants (43.4%) were graduates of nursing or midwifery secondary schools and the majority of them were working morning, evening and night shifts.

All midwives performed medio-lateral episiotomies but the majority of the study sample (83%) had received no training course on performing episiotomies. The majority of the midwives (71.7%) mentioned that performing an episiotomy was their own decision, while the rest (29.3%) stated that physicians helped make the decision. The midwives reported 16 clinical reasons for performing episiotomies, with the major clinical reason being macrosomia (large fetus) (71.7%). More than half of midwives stated that a breech delivery (58.5%) was a clinical reason for performing an episiotomy, followed by shoulder dystocia (54.7%), the prevention of perineal tearing (50.9%) and fetal distress (50.9%) [Table 1].

There was a highly significant association between the midwives' number of years of experience in the delivery room and choosing shoulder dystocia as a

**Table 2:** Association between the midwives' years of experience in the delivery room and the top five clinical reasons for performing an episiotomy (N = 53)

Clinical reasons	Years of experience n (%)				P value
	≤5	6–15	16–25	>25	
<b>Likely perineal tear</b>					
Yes	9 (60)	9 (60)	7 (41.2)	2 (33)	0.544*
No	6 (40)	6 (40)	10 (58.8)	4 (66.7)	
<b>Fetal distress</b>					
Yes	9 (60)	7 (46.7)	7 (41.2)	4 (66.7)	0.641*
No	6 (40)	8 (53.3)	10 (58.8)	2 (33.2)	
<b>Shoulder dystocia</b>					
Yes	14 (93.3)	10 (66.7)	3 (17.6)	2 (33.3)	<0.001*
No	1 (6.7)	5 (33.3)	14 (82.4)	4 (66.7)	
<b>Breech delivery</b>					
Yes	11 (73.3)	10 (66.7)	6 (35.3)	4 (66.7)	0.133*
No	4 (26.7)	5 (33.3)	11 (64.7)	2 (33.3)	
<b>Macrosomia</b>					
Yes	14 (93.3)	11 (73.3)	10 (58.8)	3 (50)	0.079*
No	1 (6.7)	4 (26.7)	7 (41.2)	3 (50)	

\*Fisher's exact test was applied.

clinical reason for performing an episiotomy [Table 2]. There was also a highly significant association between the midwives' level of education and choosing perineal tear and shoulder dystocia as clinical reasons, as well as a significant association between the level of education and choosing breech delivery and macrosomia as reasons for performing an episiotomy [Table 3]. Furthermore, there was a statistically significant difference in the midwives' demographic characteristics between the governorates of Erbil, Duhok and Sulaymaniyah.

## Discussion

Currently, continuing controversy prevents a consensus regarding justifiable clinical reasons for performing an episiotomy.<sup>6</sup> The primary results of this study indicate that the main clinical reasons of midwives in the Kurdistan Region of Iraq for performing episiotomies were due to the delivery of a large fetus, shoulder dystocia, fetal distress and a likely perineal tear or injury. These fetal and maternal factors accounted for more than 50% of the identified reasons in this study. This finding is congruent with a number of national guidelines and recent studies that recommend using episiotomies to aid in deliveries when the perineum is tight and causing poor progress during the second stage of labour.<sup>13,14</sup> In addition, an episiotomy also allows more space during operative or manipulative deliveries, such as in forceps-assisted or

**Table 3:** Association between midwives' levels of education and their top five clinical reasons for performing an episiotomy (N = 53)

Clinical reasons	Level of education <sup>†</sup> n (%)				P value
	Primary	Secondary	Institute	College	
<b>Likely perineal tear</b>					
Yes	3 (18.8)	15 (65.2)	7 (77.8)	2 (40)	0.007*
No	13 (81.3)	8 (34.8)	2 (22.2)	3 (60)	
<b>Fetal distress</b>					
Yes	6 (37.5)	14 (60.9)	3 (33.3)	4 (80)	0.200*
No	10 (62.5)	9 (39.1)	6 (66.7)	1 (20)	
<b>Shoulder dystocia</b>					
Yes	3 (18.8)	13 (56.5)	8 (88.9)	5 (100)	<0.001*
No	13 (81.3)	10 (43.5)	1 (11.1)	0 (0)	
<b>Breech delivery</b>					
Yes	4 (25)	17 (73.9)	6 (66.7)	4 (80)	0.011*
No	12 (73)	6 (26.1)	3 (33.3)	1 (20)	
<b>Macrosomia</b>					
Yes	7 (43.8)	18 (78.3)	8 (88.9)	5 (100)	0.025*
No	9 (56.3)	5 (21.7)	1 (11.1)	0 (0)	

<sup>†</sup>Both nursing or midwifery qualifications were considered appropriate as there is no difference between midwives with nursing qualifications and those with midwifery qualifications in Iraq. \*Fisher's exact test was applied.

breech deliveries or in cases of shoulder dystocia.<sup>11,15</sup> Further reasons include preventing damage to the fetus during a face or breech presentation or during instrumental delivery, or shortening the second stage of labour due to fetal distress or a maternal medical condition. In some countries, an episiotomy is indicated to accommodate issues associated with female genital mutilation.<sup>16</sup> An episiotomy is also indicated for preventing perineal trauma in women with a history of surgical repair to the pelvic floor, bladder or fistula, and in cases when the perineal body is unusually short.<sup>17</sup>

Other indications, such as buttonholing (a short straight incision into a cavity or organ), a rigid perineum or previous scarring have been found by Gibbon not to be justifiable reasons to perform an episiotomy.<sup>15</sup> In addition, de Tayrac *et al.* recommended the routine use of episiotomies to prevent perineal tears, urinary incontinence, fecal incontinence and genital prolapse should be abandoned.<sup>18</sup>

With regards to the actual number of clinical reasons for performing an episiotomy, the present study identified 16 reasons in total. A study in Singapore by Wu *et al.* identified 12 midwife-reported reasons for performing episiotomies, of which only one reason—fetal distress—was supported by the international guidelines.<sup>19</sup> The primary reasons for performing episiotomies in primiparous women were primiparity and fetal distress; among multiparous

women, the leading reasons were fetal distress and poor maternal effort.<sup>19</sup> Another study by Wu *et al.* examining 20 midwives' reasons for performing episiotomies showed that primiparity was the most frequently cited factor in addition to fetal bradycardia (distress) and macrosomia.<sup>20</sup>

In the current study, midwives in the three governorates reported different numbers of reasons for performing episiotomies. The midwives in Duhok reported only 10 reasons for performing an episiotomy in comparison to the 16 given by midwives in other cities. This may be due to the significant difference between demographic characteristics and the lack of uniform training in the region.

All midwives in the current study performed medio-lateral episiotomies. Studies have shown a decreased rate of deep perineal tears and trauma in this type of episiotomy and a high level of protection from severe perineal lacerations in cases where vacuum and forceps deliveries are used.<sup>6,21–23</sup>

In general, the majority (71.7%) of the midwives in the present study had the authority to make the decision to perform episiotomies, which is consistent with the results of a Nigerian study in which the vast majority (75.6%) of episiotomies were authorised and performed by midwives.<sup>24</sup> According to the International Confederation of Midwives, midwives should hold the responsibility of determining and performing episiotomies.<sup>25</sup> However, the majority (85.7%) of midwives in Duhok did not make the decision to perform episiotomies. In these cases, the decision was made either by the physician alone or in cooperation with the midwife.

It is evident that the midwives' education, experience and knowledge influence their decisions on episiotomy practice; this should be updated through continuous education.<sup>26</sup> However, the vast majority of nurse/midwives in the present study had received no training course on episiotomies; this may have affected their technique and the type of episiotomy performed, in addition to their knowledge of indications for performing an episiotomy. The strongest predictor of episiotomy use was found to be the type of care provider (either physician, midwife or faculty member), with weaker associations found to be the baby's birth weight, the length of the second stage of labour or the use of epidural analgesia.<sup>27</sup>

## Conclusion

The findings of this study indicate that the midwives' clinical reasons for performing episiotomies were not evidence-based or uniform in the three governorates of Kurdistan. The midwives' age, number of years of

experience in the delivery room, specialties and levels of education affected their reasons for performing episiotomies. Training courses and continuing education for midwives, in addition to developing regional clinical policies and guidelines, are essential to unify the practice of evidence-based surgical procedures. Further research is recommended to analyse the reasons for performing episiotomies in individual deliveries.

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