



## Mediolateral episiotomy: are trained midwives and doctors approaching it from a different angle?



Ka Woon Wong, Karthigan Ravindran, James M. Thomas, Vasanth Andrews\*

Obstetrics and Gynaecology, Ashford & St Peters' Hospitals, NHS Foundation Trust, Guildford Road, Chertsey KT16 0PZ, United Kingdom

### ARTICLE INFO

#### Article history:

Received 22 September 2013

Received in revised form 4 November 2013

Accepted 2 December 2013

#### Keywords:

Episiotomy

Angle

Training

Midwives

OASIS

### ABSTRACT

**Objectives:** The angle at which a mediolateral episiotomy is incised is critical to the risk of obstetric anal sphincter injuries (OASIS). When a mediolateral episiotomy is incised at least 60 degrees from the midline it is protective to the anal sphincter. The objective of our study was to investigate how accoucheurs described and depicted a mediolateral episiotomy.

**Study design:** One hundred doctors and midwives were invited to complete an interview-administered questionnaire in a district general hospital in the United Kingdom over a 10-month period commencing in August 2012. Accoucheurs were asked to describe the angle at which they would cut a mediolateral episiotomy, and to depict this on a pictorial representation of the perineum. The angle drawn was calculated by an investigator blinded to the participant's initial description of a mediolateral episiotomy. **Results:** Sixty-one midwives and 39 doctors participated. Doctors and midwives stated they would perform a mediolateral episiotomy at an angle of 45 degrees from the midline, but midwives depicted episiotomies 8 degrees closer to the midline (37.3 degrees vs. 44.9 degrees,  $p = 0.013$ ) than they described. Seventy-six percent of accoucheurs had undergone formal training in how to perform a mediolateral episiotomy, but this had no impact on their clinical practice. Accoucheurs who had been supervised for ten episiotomies before independent practice performed them in keeping with the angle they described.

**Conclusions:** Doctors and midwives are unaware of the appropriate angle (60 degrees) at which a mediolateral episiotomy should be incised at to minimise obstetric anal sphincter injury. The correct angle should be emphasised to accoucheurs to minimise the risk of anal sphincter damage. In addition midwives depict episiotomies that are significantly more acute than they describe. Accoucheurs should also perform at least 10 episiotomies under supervision prior to independent practice. Training programmes should be devised and validated to improve visual measurement of the episiotomy incision angle at crowning. Consideration should also be given to the development of novel surgical devices that help the accoucheur to perform a mediolateral episiotomy accurately.

Crown Copyright © 2013 Published by Elsevier Ireland Ltd. All rights reserved.

### 1. Introduction

Episiotomy is the most commonly performed obstetric procedure that requires suturing [1], but its indications and efficacy are subject to doubt and its practice has remained controversial. Episiotomies were first described in 1741 and were believed to prevent severe perineal tears, urinary incontinence, anal incontinence and pelvic floor relaxation, and to protect the newborn from intracranial haemorrhage and intrapartum asphyxia [2]. Episiotomies are usually performed as midline or mediolateral. The advantages of midline episiotomies are easier surgical repair, better healing, less postoperative pain and blood loss [3]. They are, however, associated with a significantly higher rate of anal

sphincter damage and therefore when performed in the United Kingdom are usually done as a mediolateral episiotomy (MLE) [4–9].

Tincello [10] reviewed midwifery and obstetric textbooks in common use and found that they recommend an angle of between 40 and 60 degrees from the midline for performing a MLE, without providing any evidence for this practice.

It is now apparent that the angle at which an MLE is performed is critical. Andrews et al. found that performing an MLE was an independent risk factor for obstetric anal sphincter injuries (OASIS) [11], but they calculated the angle after an episiotomy was sutured was between 20 and 27 degrees [12], which is known to equate to an incision angle of about 40 degrees from the midline [13]. More recently, evidence has come to light that when one performs a MLE at least 60 degrees from the midline that it may in fact protect against OASIS [13]. In addition Stedenfeldt et al. [14] demonstrated that there is a U-shaped association between the post-delivery

\* Corresponding author. Tel.: +44 7932 714 638; fax: +44 1483472064.  
E-mail address: [Vasanth\\_andrews@hotmail.com](mailto:Vasanth_andrews@hotmail.com) (V. Andrews).

episiotomy angle and risk of OASIS, and those resulting in an angle between 30 and 60 degrees in the so-called “safe zone” minimise the risk of OASIS. Also when an MLE is performed appropriately with an operative vaginal delivery it may actually reduce the risk of anal sphincter involvement six fold [15].

Nearly 20 years ago Sultan et al. [16] evaluated junior doctors and midwives views on their training in perineal anatomy and repair, and reported widespread dissatisfaction with their training. Subsequent to this, simulation based workshops have been introduced to train doctors and midwives in perineal anatomy and episiotomy repair techniques [17,18].

With the introduction of almost universal training in episiotomy repair for midwives and doctors, and with the knowledge of the angle at which a MLE should be performed in order to prevent anal sphincter damage, we wished to determine the angle at which accoucheurs thought an episiotomy should be performed. In addition, in order to correlate their theoretical knowledge with their practical understanding we ask them to depict the angle they described on a picture of the perineum.

## 2. Methods

One hundred doctors and midwives were invited by KR and KW to complete an interview-administered questionnaire investigating the indications, concerns and anatomical considerations of performing a mediolateral episiotomy. This study was conducted over a 10 month period commencing in August 2012. The study was undertaken in a district general hospital in the South East of England. Participants were asked to describe the angle at which they would cut an episiotomy, and to depict this on a pictorial representation of the perineum (Fig. 1). The angle of the episiotomy drawn on the pictorial questionnaire was then calculated by a method previously described [19]. This was done by an investigator who was blinded to the participant’s description of how they would perform an episiotomy. In addition data were obtained about whether they had attended any formal training in episiotomies, and their level of supervision prior to independent practice in performing an MLE (Fig. 2).

### 2.1. Statistical analysis

Data were entered onto a Microsoft® excel database and analysed with IBM SPSS version 19. Mann Whitney *U* test was used to calculate differences in the mean for binomial non-parametric data and Kruskal–Wallis test when comparing more than two independent samples. Chi square tests were used to compare categorical data.

## 3. Results

One hundred midwives and doctors (61 midwives and 39 doctors) were invited and all agreed to participate in this study. Of the 61 midwives, 55 were junior (Band 5 and 6) and six were senior midwives (Band 7 and 8). Twenty-one doctors were trainees and 15 were consultants or had completed their specialist training. Thirty-two percent of participants had less than one year of clinical experience, 42% had between one and ten years’ experience and 26% more than ten years’ experience. Seventy-six percent had undergone formal training in performing episiotomies.

Nearly 70% of accoucheurs (55 (90%) midwives and 14 (45%) doctors) had undertaken fewer than five episiotomies before independent practice (Table 1) and only 37% had done more than ten episiotomies unsupervised.

Both doctors and midwives stated that in their clinical practice they would perform a mediolateral episiotomy at an angle of 45 degrees from the midline (Table 2), but only 25 accoucheurs stated

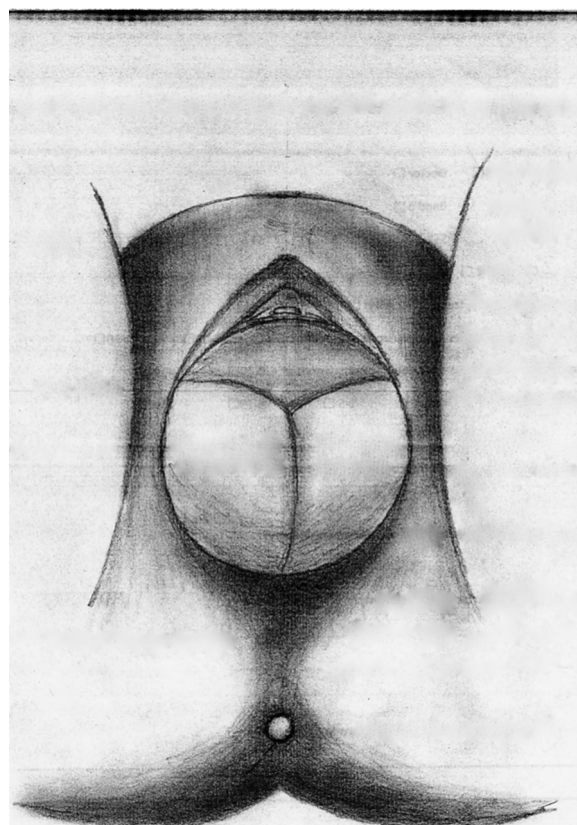


Fig. 1. Pictorial representation of the perineum.

they would incise them at an angle of 60 degrees or more from the midline. While doctors subsequently depicted an angle of 45 degrees, however, midwives drew episiotomies that were actually eight degrees closer to the midline. In addition midwives drew episiotomies that were shorter by 1.3 cm and ended 1.5 cm closer to the midpoint of the anal canal.

The main indications stated for performing episiotomies were to expedite delivery (31%), prevent OASIS (26%) and fetal distress (23%). The main concerns expressed about performing episiotomies were anal sphincter extension (36%), bleeding (35%) and infection (15%). Significantly more doctors were concerned that episiotomies may lead to anal sphincter damage (30 (77%) vs. 6 (10%),  $p < 0.01$ ), while midwives were more worried that episiotomies caused infection (14 (23%) vs. 1 (3%),  $p < 0.01$ ).

While 13 (21%) midwives and all the doctors claimed to know which muscles are routinely cut when performing a mediolateral episiotomy; none of the midwives and only 18% of doctors knew that the superficial transverse perineal and bulbospongiosus muscles were involved.

Training courses had no impact on how an episiotomy was performed (Table 3). However, accoucheurs who had been supervised for at least ten episiotomies before independent practice performed episiotomies that were angled further away from the midline and the anal canal (Table 4).

Table 1  
Numbers of episiotomies performed before independent practice.

Numbers of episiotomies performed before independent practice	Number of accoucheurs (total = 100)
0–5	69
5–10	7
>10	24

Download English Version:

<https://daneshyari.com/en/article/3919797>

Download Persian Version:

<https://daneshyari.com/article/3919797>

[Daneshyari.com](https://daneshyari.com)