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Chapter

Update and Trend in Episiotomy Practice

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Abstract

Episiotomy is one of the most commonly practiced obstetric procedures done to enlarge the diameter of the vulval outlet to facilitate the passage for the fetal head and prevent an uncontrolled tear of the perineal tissues in the second stage of labor. Historically, the procedure was indicated to prevent third- or fourth-degree perineal tears as well as for prolonged second stage, macrosomia, non-reassuring fetal heart rate, instrumental delivery, occiput posterior position, and shoulder dystocia. Routine episiotomy is now considered to be obstetrics violence, rates of not exceeding 10% have been recommended by World Health Organization (WHO). Despite this recommendation, episiotomy is still practiced routinely in many settings.

Keywords: episiotomy, obstetric anal sphincter injuries (OASIs), redness, ecchymosis, edema, discharge and apposition (REEDA), scale restrictive episiotomy, and mediolateral episiotomy

1. Introduction

Episiotomy is a surgical cut in the tissue between the vagina and the anus (called the perineum) made just before delivery. It is one of the most commonly practiced obstetric procedures done to enlarge the diameter of the vulval outlet to facilitate the passage for the fetal head and prevent an uncontrolled tear of the perineal tissues in the second stage of labor [1–3]. The procedure was introduced into obstetric practice without any sound scientific evidence corroborating any possible benefits [4]. It was promoted in the twentieth century by renowned interventionists, obstetricians such as Gabe and De Lee [5]. Their perception was that the female body was essentially defective and dependent on medical interventions to enable childbirth [5]. In 1970s, there was disagreement in the practice especially because of pressure from the women’s movements demanding changes in the obstetric model [4].

In 1983, Thacker and Banta gave a full account of the lack of scientific data supporting the use of episiotomy and the potential danger associated with the procedure [3]. Historical indications such as a prolonged second stage, macrosomia, non-reassuring fetal heart rate, instrumental delivery, occiput posterior position, and shoulder dystocia have been questioned [6].

Routine episiotomy is now considered to be obstetrics violence when a woman is automatically transformed into a patient and when routine medical procedures are
carried out without giving the woman the right to make her own decisions concerning her own body [7].

1.1 Types of episiotomy

The most commonly practiced and accepted type of episiotomy is the mediolateral, owing to its protective roles in preventing obstetric anal sphincter injury (OASI) [8]. Median/midline episiotomy, although has a bigger risk of causing OASI, is praised for causing less pain/bleeding, ease in repair, and healing more easily [9]. A clear illustration and description of the type of episiotomy can be seen in Figure 1 and Table 1. Other reported episiotomy types in literature are lateral episiotomy, which was condemned, and also a J-shaped episiotomy incision that is not commonly practiced. Figure 1 has been adopted and modified from [10].

1.2 Episiotomy repair

Episiotomy incision is generally repaired after delivery of placenta to achieve hemostasis and approximate lacerated tissues. The aseptic procedure is carried out in a well-lit room with adequate exposure and appropriate instruments and anesthesia. Since most if not all repairs are done in laboring wards, adequate local or regional analgesia is used. Extension to a third- or fourth-degree perineal tear may necessitate examination under anesthesia and requires regional or general anesthesia that is done in an operating theater.

A suture is placed approximately a centimeter proximal to the apex of the incision within the vagina and secured with a knot, vaginal mucosa, and sub-mucosa are sutured up to the hymeneal ring, perineal muscles are then approximated followed by the closure of perineal skin using a continuous subcutaneous suturing technique [11]. Continuous stitching technique is preferred to interrupted as it is associated with less pain, easily performed by the inexperienced operator, and economical [12].

Figure 1. Illustration of episiotomy types.
1.3 Current trend in episiotomy practice

Episiotomy is practiced in varied ways with differing prevalence ranging from as low as less than 1/3 to as high as 86% [13] depending on whether it is used routinely or in a restricted way.

World Health Organization (WHO) Guideline Developing Groups emphasized the need for health systems to adopt a policy of restrictive rate of not more than 10% rather than routine use of episiotomy to reduce its potential complications and the use of additional resources for its treatment [14] as restrictive episiotomy has shown benefits [15]. Restrictive other than routine episiotomy protocol has been supported by FIGO [16], a mediolateral episiotomy type is the one recommended, and this should be performed under adequate analgesia, whether anesthesia is already in place for labor, such as epidural, or by administering a local infiltration [16].

Despite the controversy regarding the validity of episiotomy’s routine use in obstetrics and the fact that liberal use of the procedure has been discouraged, this is still one of the most commonly performed obstetric procedures worldwide [17, 18]. Although this restrictive episiotomy practice has shown many benefits, especially regarding the reduction of injuries to the posterior perineum, the strictest definition of restrictive use was to avoid episiotomy unless indicated for fetal well-being. Other definitions of restrictive episiotomy are to “avoid the procedure,” use only when “medically necessary,” or not perform an episiotomy to avoid a laceration [19]. The balance between risk and benefit for episiotomy is therefore not entirely straightforward. An episiotomy may be unavoidable if the baby needs to be delivered quickly.
The lack of evidence supporting episiotomy benefits has caused a significant decline in the practice in most countries. In France, a decline from 15.5% in 2013 to 9.3% in 2017 has been realized [20], and for operative vaginal births, there had been a varied decrease in episiotomy rates from as low as 25% to as high as 75% in some geographical location in France [21].

1.4 Indications

Historical indications for episiotomy included: abnormal progress of labor, non-reassuring fetal status, prematurity, assisted vaginal delivery, shoulder dystocia. It was also believed to hasten the second stage of labor, decrease pelvic floor disorder and sexual dysfunction, reduce urinary and fecal incontinence [15]. Several guidelines recommend the use of mediolateral episiotomy for the prevention of obstetric anal sphincter injuries (OASI) [8]. Episiotomy plays the main role during assisted vaginal birth as this is related to the increased incidence of OASI. The procedure can be indicated when there is a high likelihood of third-degree or fourth-degree perineal tear, soft tissue dystocia, a requirement to accelerate delivery of a compromised fetus, and need to facilitate operative vaginal delivery or a history of female genital mutilation [22].

1.5 Factors associated with episiotomy

Varied risk and protective factors are influencing the practice of episiotomy in obstetrics. The risk factors include primiparity [23, 24], absence of prior vaginal birth, assisted vaginal delivery are among the predictive factors influencing episiotomy practice. In some settings, episiotomy operations were being performed to allow midwifery and medical students the opportunity to learn and practice the procedure [24]. Being an adolescent and having other medical conditions while pregnant is associated with the procedure [25].

Factors that are protective against episiotomy include perineal massage. This procedure can be done especially in the second stage of labor [26–28]. The procedure is an effective approach to increasing the chance of delivery with intact perineum especially for women with a first vaginal birth [29]. In other literature, massage can be started as early as 34 weeks of gestation, and it is done with oil for 5–10 min every day to increase flexibility and elasticity [30]. In addition to massage, perineal support and warm compresses during the second stage are protective for episiotomy and anal sphincter injury [30].

Another important innovative tool to reduce the risk of episiotomy is an Epi-No device, developed in early 2000, to facilitate a natural birth and reduce the risk of perineal injury including needs for episiotomy. The Epi-No device is promising, with potentially positive effects on a natural birth without major complications [31].

1.6 Obstetric anal sphincter injuries (OASI)

OASI are injuries that involve the anal sphincter. It is a dreaded complication after a vaginal delivery that has significant maternal morbidity such as perineal pain, dyspareunia, flatulence, and anal incontinence [32].

OASI either involves third or fourth-degree perineal tears. A third-degree perineal tear is defined as a partial or complete disruption of the anal sphincter muscles, a fourth-degree involves the rectal mucosa [33] as seen in Table 2 and Figure 2.
The risk of getting OASI can be done by relieving pressure on the central posterior perineum by an episiotomy and/or controlled delivery of the head. An episiotomy aimed at 60° from the midline has been seen to be protective for OASI [36]; hence, the introduction of episiotomy scissors specially designed to achieve a cutting angle of 60°, EPISCISSORS-60® [37]. Vacuum-assisted delivery and bigger babies were seen to be an important independent factor in one cohort study [38].

### OASI repair—sphincteroplasty

A repair can be done primarily if OASI is diagnosed following vaginal delivery, and this represents the mainstay of treatment. A delay of up to 12 h is allowable if resources for repair are not available. A secondary repair can be done later when tissue edema has subsided for cases diagnosed later or if injuries have been unrepaired for more than 12 h, and this is referred to as secondary repair [39].

The aim of sphincter repair (either primary or secondary) is to restore a functioning anal canal by reconstruction of a muscular cylinder that is at least 2 cm thick and 3 cm long [39].
Meticulous hemostasis and anatomic approximation with a multilayer closure of all disrupted tissue layers are the key principles for preventing complications and restoring fecal continence and two recognized methods for the repair of OASI: end-to-end (approximation) and overlap repair [39] are important depending on the extent of the injuries as illustrated in Figure 3.

An overlap is more superior to an end-to-end method in terms of reduction in perineal pain, dyspareunia, flatus incontinence, and fecal incontinence [39, 40].

Although the repair techniques have been well documented, the confidence in detecting OASI and competence in the repair of OASI does not correlate with knowledge of anatomy and risk factors of OASI in a survey among obstetricians [41].

1.7 Complications

The suitability of routine use of episiotomy has been questioned by specialists and scientific societies, and several professional medical associations and patient and women's rights advocates have been associating it with obstetric violence [9]. Episiotomy has been associated with the risk of repeat episiotomy in the subsequent birth due to tighter perineum and weaker scar [42]. Post episiotomy pain is common after delivery, and this may end up in pain at first intercourse especially if it occurs in the first 3 months after delivery [43]. The risk is higher if intercourse occurs within the first 6 weeks after delivery and in some cases, women present with gaping

Figure 3. Episiotomy repair technique. Adopted from [39].
episiotomy wounds following intercourse [44]. The incision substantially increases maternal blood loss, the average depth of posterior perineal injury, risk of anal sphincter damage, improper wound healing, increased amount of pain in the first several postpartum days, and infection [45]. Episiotomy at the first vaginal birth significantly and independently increases the risk of repeated episiotomy and spontaneous tears in subsequent delivery [42, 46].

Episiotomy-related morbidity can be measured using the Redness, Ecchymosis, Edema, Discharge, and Apposition scale (REEDA scale) [47]. Higher REEDA scores denote poor healing process or severe trauma to the perineal tissue as shown in one of our studies in Mulago Hospital in Uganda [48]. The rate of the gaping wound is particularly higher among those done episiotomy compared with spontaneous perineal tear [48], and this can be attributed to the fact that spontaneous perineal tear occurs normally along the natural tissue planes, and it’s easier to repair compared with episiotomy. A similar study in Mulago relates episiotomy to increased risk of infection and the need for secondary re-suturing [49].

Episiotomy-related pain has been shown to persist for more than 14 days after delivery [48] supporting claims that cutting across tissue planes is associated with more pain compared with spontaneous tear that normally follows the natural tissue planes as reported by [3, 50, 51] and that episiotomy is a painful policy [2]. A meta-analysis done by [52] found out that episiotomy is associated with increased incidence and severity of postpartum perineal pain.

2. Conclusion

An episiotomy is, therefore, a traumatic procedure that should be practiced restrictively. World Health Organization (WHO) Guideline Developing Groups and FIGO emphasized the need for health systems to adopt a policy of restrictive rate of not more than 10%, and mediolateral episiotomy type is the one recommended, and this should be performed under adequate analgesia, whether anesthesia is already in place for labor, such as epidural, or by administering a local infiltration.

Conflict of interest

The authors declare no conflict of interest.
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Current Challenges in Childbirth


Update and Trend in Episiotomy Practice
DOI: http://dx.doi.org/10.5772/intechopen.102973


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