



Episiotomy in modern clinical practice: friend or foe?

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Abstract

The Cochrane library first published a meta-analysis in 2000 on the role of the episiotomy in modern clinical practice, which concluded that only a policy of selective episiotomy is acceptable with evidence-based improvement in maternal health compared with routine episiotomy. Many years later, however, the new version of the Cochrane meta-analysis changed the previous recommendations in that the selective use of episiotomy could not be considered beneficial in all cases. A selective policy is associated with a statistically significant reduction in severe perineal and/or vaginal trauma, whereas routine episiotomy seems to protect against these complications only after instrumental deliveries. Both in the short and the long term, selective medio-lateral episiotomy has no additional beneficial effects without clear evidence of causing harm to the mother or baby.

Keywords Anal incontinence · Episiotomy · Urinary incontinence · Pelvic floor dysfunction · Vaginal delivery

Introduction

Episiotomy is one of the most commonly performed surgical procedures in medicine. The Cochrane library first published a meta-analysis in 2000 on the role of the episiotomy in modern clinical practice that concluded that only a policy of selective episiotomy is acceptable with evidence-based improvement in maternal health compared with routine episiotomy [1]. An update of this review in 2008 confirmed the same conclusions [2]. Ten years later, however, the new version of the Cochrane meta-analysis changed the previous recommendations in that the selective use of episiotomy could not be considered beneficial in all cases, although there is no clear evidence that this approach would result in harm to mother and baby [3]. What are the advantages of selective versus routine episiotomy? Is there a difference between the complications of medio-lateral and midline procedures? What are the reasons for the recent change in the recommendations of Cochrane's review? It seems timely to

revisit this debate by urogynecologists to give a balanced and evidence-based opinion on whether or not episiotomy is routinely indicated at vaginal birth and whether the benefits and risks of medio-lateral versus the midline procedures are different.

Discussion

Episiotomy is defined as a surgical incision in the perineum to enlarge the vaginal introitus and facilitate delivery of the fetus. Sir Fielding Ould, an obstetrician, introduced this procedure into obstetric practice in 1742. In 1920, Joseph DeLee, an eminent obstetrician from Chicago, recommended the use of “elective” medio-lateral episiotomy although the standard of care in the USA gradually shifted to the midline procedure in the 1970s. The routine use of episiotomy was perceived as a milestone in obstetric care, resulting in significant improvement in maternal and neonatal outcomes worldwide. By the 1980s, the prevalence of episiotomy reached 90% of all vaginal deliveries in some South-American and Asian countries, and was performed in more than 60% of deliveries in North America. In Europe, the frequency of episiotomy was only 30% in that period, but progressively increased in the 1990s [4]. Despite the promising results in the 1980s, both women and physicians, however, began questioning whether the hypothetical “benefits” of episiotomy were true because of the associated morbidity. In fact, two prestigious scientific journals introduced an entirely different paradigm as early as

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1985: episiotomy is harmful and sometimes is an unethical clinical practice [5]. In response to public and clinician concern, the Cochrane library published a meta-analysis on episiotomy that cautioned against the routine use of episiotomy in view of the increased risk of complications. Selective episiotomy policy was hence associated with less severe perineal trauma and perineal suturing in addition to fewer healing complications [1]. Several other studies and expert opinions subsequently supported these conclusions and recommended reducing the episiotomy rate as good obstetric practice. However, most of these studies, which were also included in the Cochrane review, reported on women who had midline episiotomy. Over the past three decades, there has been growing evidence that the midline procedure is associated with a significantly higher incidence of evident or occult anal sphincter injuries and, consequently, a higher risk of anal or fecal incontinence and dyspareunia [6]. In contrast, when medio-lateral episiotomy was performed, a 50% relative reduction of third-degree perineal tears was observed for every 6° of lateral deviation in the angle of episiotomy from the perineal midline [7]. Elective medio-lateral episiotomy also decreased the frequency of perineal tears by 40% in primigravid women with a short perineum of <4 cm and a small anal position index (length of perineum divided by the distance between the fourchette and the inferior margin of the coccyx) of <0.42 in a multiple logistic regression model that included other obstetric variables [8]. In the light of these data, the gold standard episiotomy approach became the medio-lateral technique and the midline procedure was gradually abandoned.

The role of selective versus routine medio-lateral episiotomy has been recently revised. Bø et al. compared vaginal resting pressure, pelvic floor muscle strength, and prevalence of urinary incontinence at 6 weeks postpartum in women with and without lateral or medio-lateral episiotomy and found that the results in the two groups were not different [9]. Handa et al. investigated whether medio-lateral episiotomy, perineal laceration, and instrumental delivery were associated with pelvic floor disorders and concluded that medio-lateral episiotomy was not responsible for any long-term complications [10, 11]. Another recently published article demonstrated that the use of medio-lateral episiotomy during vacuum delivery or forceps delivery is strongly associated with reduction in the rate of obstetric anal sphincter injuries (OASIS) in both primiparous and multiparous women [12]. The Cochrane review of 2017 concluded that selective use of episiotomy in women (where a normal delivery without forceps is anticipated) significantly reduces the risk of severe perineal trauma and, therefore, the rationale for conducting routine episiotomies to prevent severe perineal trauma is not justified by current evidence. Further research is needed to confirm whether or not routine episiotomy is useful and should be advocated in women undergoing instrumental delivery [3].

Conclusions

Until new evidence is available, we do not support setting a standard rate of medio-lateral episiotomy for normal deliveries, whether selective or routine, based on hypothetical analysis of the long-term protective effects of episiotomy on developing pelvic floor disorders, perineal pain, and dyspareunia. There is strong evidence that midline episiotomy increases the risk of these complications, particularly postpartum anal sphincter injuries. We believe that clinical practice guidelines regarding episiotomy should be women-centered and primarily driven by robust quality-of-life data on pelvic floor health rather than by health care system statistics of obstetrical procedures. We agree with Jiang et al. [3] on the role of the selective use of episiotomy, but we would also like to underline that we should not demonize medio-lateral episiotomy; the available studies demonstrated that medio-lateral episiotomy, performed when needed and not routinely, is not associated with any long-term complications [9–11, 13].

Compliance with ethical standards

Conflicts of interest None.

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