

Episiotomy – An Evidence-based approach

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ABSTRACT

This article reviews the evidence relating to episiotomy.

INTRODUCTION

Few interventions are as misunderstood or as maligned as the episiotomy. This simple incision to enlarge the vaginal introitus has proponents as well as opponents. The practice was born out of seemingly logical justifications. It has been suggested that a linear surgical incision is easier to repair than a spontaneous vaginal tear which may be jagged and haphazard. Proponents suggest that because an episiotomy can be angled away from the anus, it may be helpful in preventing obstetric anal sphincter injuries (OASIS), namely 3rd and 4th degree perineal injuries¹. Other justifications for episiotomy are hastening delivery when clinically necessary such as in acute fetal distress when the fetal head is just about to crown, protection of the fetal head and even reducing damage to the maternal pelvic floor² or reducing the risk of shoulder dystocia. There is a common perception that the perineum in the Asian woman is intrinsically different and that episiotomy is more likely to be necessary, particularly in primigravidae. There is little scientific evidence to support this belief.

ROUTINE EPISIOTOMY VERSUS RESTRICTIVE EPISIOTOMY

The advent of evidence-based medicine allowed us to put these beliefs and theories to the test. Two approaches to performing an episiotomy have been extensively studied. The first is a routine approach in

which all women will receive one. The second is restrictive use, where the obstetrician attempts to avoid an episiotomy where possible but will perform one based on clinical judgement in certain scenarios. These two approaches were studied specifically with respect to spontaneous vaginal deliveries. Findings in randomised controlled trials as well as systematic review and meta analysis of these trials (as in the Cochrane Library)³ support the view that in spontaneous vaginal births, selective use was beneficial. A restrictive approach resulted in a 30% lower incidence of severe perineal injury defined as 3rd and 4th degree perineal tears. The irony of this finding must not be lost amongst obstetricians because it means that episiotomies increase the risk of a complication they were designed to prevent. It is explained by the fact that if the perineum is allowed to stretch and tear spontaneously, it should only tear as much as will be necessary to deliver the baby whereas in making an episiotomy, an obstetrician may create a more generous incision than required. Episiotomies have also not been shown to have any fetal benefit in terms of protection to the fetal head or to protect the maternal pelvic floor. A restrictive approach to episiotomy also results in a reduced need for suturing which simply means some women may have intact perineums or very superficial tears which do not require suturing.

The only benefit of a routine approach appears to be reduced anterior trauma in the perineum. This refers to tears and lacerations in the peri-urethral area and anterior vaginal wall. This finding is explained by the fact that making an incision in the posterior vaginal wall will reduce the pressure and consequent trauma to the opposite anterior vaginal

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wall. It is also evident that making an episiotomy will hasten delivery of a fetal head which is about to crown so the intervention can be useful in scenarios where fetal distress occurs just prior to crowning. An episiotomy may also be useful to gain access to the vagina to perform the necessary fetal manoeuvres to dislodge the anterior shoulder once shoulder dystocia has been diagnosed. In this respect, they do not prevent shoulder dystocia in which the source of obstruction is the anterior shoulder being wedged against the bony pelvis. They merely facilitate access to the vagina by the obstetrician's hand to carry out the manoeuvres to overcome the dystocia.

It is important to point out that research has focused on comparing a routine approach versus a restrictive approach and not performing an episiotomy versus not performing one. A restrictive approach does not mean one should avoid an episiotomy at all costs. A considered approach is called for where an obstetrician allows the perineum to distend and stretch spontaneously and makes a judgment as to whether an episiotomy is needed just before crowning. Clinical information such as fetal head position and fetal size can also be incorporated in this decision-making process and the clinician can choose to perform an episiotomy when there is malposition, such as occiput posterior position when the presenting diameters are larger, or if the fetus is judged to be big. A restrictive approach is, therefore, a matter of subjective assessment and clinical experience. It is unclear what the precise episiotomy rate should be when practicing a restrictive approach and this may differ depending on the patient population. In 1996, the WHO suggested in 1996 that the optimal rate should not exceed 10%. One large randomised controlled trial performed in Argentina suggested that an episiotomy rate of more than 30% was unlikely to be beneficial⁴. In Argentina at the time of this trial, episiotomy was a routine intervention in nearly all nulliparous and primiparous births⁵. The role of episiotomy in operative vaginal deliveries such as vacuum or forceps-assisted deliveries is less clear from the evidence-based perspective. It would seem reasonable to perform an episiotomy if the obstetric forceps is used as the instrument increases the diameter of the presenting part by virtue of the

blades being applied alongside the fetal head. A systematic review and meta-analysis concluded that routine mediolateral episiotomies increases the risk of OASIS in multipara had no effect of the OASIS rate in nullipara undergoing vacuum-assisted deliveries⁶. This would suggest that at least a proportion of women undergoing vacuum-assisted deliveries may not need an episiotomy.

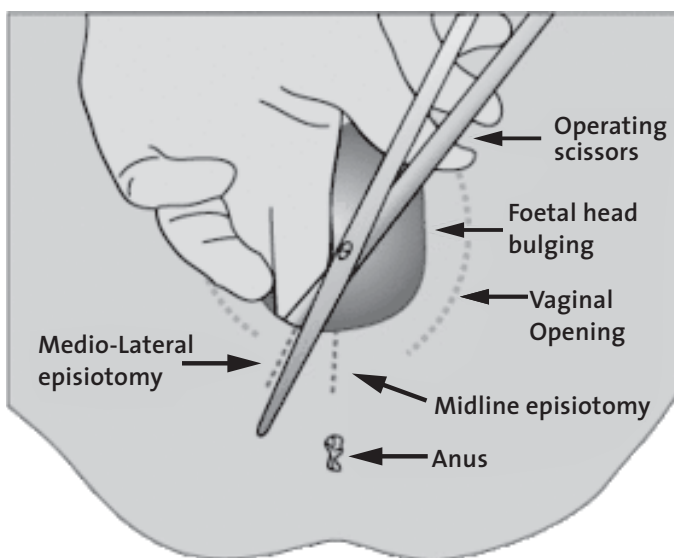
The technique for making an episiotomy has also been studied. Some obstetricians favour a mediolateral episiotomy which is angled between 45 to 60 degrees away from the midline hence directing it away from the anus. The alternative is a midline episiotomy. The evidence is clear on this issue because midline episiotomies have been shown to increase the risk of 3rd and 4th degree tears. Proponents of the midline episiotomy maintain that it is easier to repair and is less painful. There is a lack of scientific data to support these findings and, in any case, the reduction of 3rd and 4th degree tears is a benefit that should outweigh other short-term considerations. When mediolateral episiotomies are performed, one study suggested that they are often performed too close to the midline⁷. This may result from the fact that the perineum is stretched over the fetal head at crowning, giving the false perception that an episiotomy has been made at the recommended 45 to 60 degrees away from the midline when, in reality, it is much closer. Specially-designed angled scissors have been designed to ensure that the obstetrician consistently performs an episiotomy which is sufficiently deviated from the midline⁸.

There is compelling evidence to show that continuous suturing of the episiotomy wound with subcuticular suturing for the skin is associated with less short term pain compared to placing interrupted sutures and wound dehiscence rates are the same with both techniques⁹. Using polyglycolic acid suture materials (such as Vicryl®) is also associated with reduced short-term pain compared to catgut¹⁰. Catgut is also increasingly difficult to obtain. As it is manufactured from sheep gut, there are concerns over disease transmission such as scrapie which is caused by a prion virus and is the sheep-borne version of bovine spongiform encephalopathy (BSE) or "mad cow disease".

SUMMARY

- 1) A restrictive approach to episiotomy is shown to be beneficial when compared to routine episiotomy in spontaneous vaginal births.
- 2) Episiotomy should be considered when there is a need to expedite delivery, in operative vaginal deliveries and in the management of shoulder dystocia.
- 3) Mediolateral episiotomies reduce the risk of anal sphincter injuries compared to midline episiotomies.
- 4) Continuous, subcuticular suturing of an episiotomy wound with polyglycolic acid sutures (such as Vicryl®) is associated with less short-term pain when compared to interrupted sutures using catgut

Fig.1 Midline and mediolateral episiotomies



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