Saturday 17 June 2000

BMJ

Midline versus mediolateral episiotomy

We still don't know which cut is better or how beneficial the procedure is

First described by a Scottish midwife in the 1740s, episiotomy was not used widely until the middle of the 20th century.[1] Prominent obstetricians in the United States argued that childbirth was a "decidedly pathological process" and that a small incision would speed labour, decrease trauma, and allow the perineum to be restored to nearly virginal condition after proper suturing.[2 3] This became standard practice in the United States and to a lesser degree in Europe throughout most of the century. The type of incision varied: in the United States, for example, midline episiotomy was preferred, in the United Kingdom the mediolateral procedure was standard. What is the evidence that routine episiotomy is beneficial or that one incision is better than another?

The first systematic review of this procedure was published in 1983.[4] The evidence at that time—three studies with control groups and no randomised controlled trials—concluded that "little research has been done to test the benefit of the procedure, and no published study could be considered adequate in its design and execution to determine whether hypothesized benefits do in fact result." The authors noted that the purported benefits of episiotomy, including prevention of third degree laceration, damage to the pelvic floor, and fetal injury (both mechanical and hypoxic), were plausible but unproved. However, they found that the risks of episiotomy, including the extension of the incision, unsatisfactory anatomical results, blood loss, pain, oedema, and infection, were serious.

A subsequent systematic review of the literature in 1995 found that episiotomies prevent anterior perineal lacerations (which result in minimal morbidity) but confer none of the other maternal or fetal benefits that are traditionally ascribed.[5] The author argued that the incision substantially increased maternal blood loss, the average depth of posterior perineal injury, the risk of damage to the anal sphincter, the risk of improper healing of the perineal wound, and the amount of postpartum pain.

The Cochrane Collaboration's systematic review, last updated in May 1999, included six randomised controlled trials, all published since 1983.[6] These trials compared the restricted use of episiotomies with routine use. Data from the six studies were combined: in the group routinely given episiotomies, 72.7% (1752/2409) of women in the routine use group had episiotomies while only 27.6% (673/2441) of women in the restricted group had episiotomies. Compared with routine use, the restricted use of episiotomy involved significantly less trauma to the posterior perineum, fewer sutures, and fewer complications of healing. The restricted use of episiotomy was associated with more trauma to the anterior perineum. There was no difference in the incidence of severe vaginal trauma, dyspareunia, urinary incontinence, or scores on measures of severe pain. The Cochrane reviewers concluded that restricted policies have some benefits when compared with routine episiotomy but called for further trials to address several unanswered questions, such as what the indications are for the restricted use of episiotomy in an assisted delivery, a preterm delivery, a breech delivery, and in predicted macrosomia and tears presumed to be imminent.

One of the greatest concerns is difficult to address in a randomised controlled trial: what is the relation, if any, between episiotomy and pelvic floor disorders later in life, especially urinary stress incontinence and relaxation of the pelvic floor? Although some obstetricians contend that episiotomy may help prevent these outcomes, there remains a need for epidemiological studies to examine this belief.[7 8]

The more pressing research need, however, is to evaluate which episiotomy technique (mediolateral or midline) provides the best outcome. There have been only two published trials that addressed this question, both of which were excluded from the Cochrane review because of poor methodological quality.[6 9 10] While it is not clear what the ideal rate of episiotomy might be for primiparous and nulliparous women, in Sweden 9% of primiparous women have episiotomies.[11]

It is important to ascertain what the appropriate indications for episiotomy are and which is the best technique to use. The suggested advantages of the midline procedure include better sexual function in future and better healing, with improved appearance of the scar. On the other hand, the midline procedure may be associated with higher rates of extension and a coincident increase in perineal trauma. Although this question could be best addressed with randomised controlled trials, such trials rarely detect uncommon events. It is important, therefore, that cohort and case-control studies are designed to look at important but uncommon events such as severe perineal trauma and the development of rectovaginal fistulas.

As episiotomy has been more carefully studied, its routine use has been questioned and has declined in some settings.[5] However, continued reassessment is needed because this promotes excellence in clinical practice and better outcomes for patients.[12] The

BMJ 2000;320:1615–6

relationship between a woman and her clinician should be built on trust, and the benefits and the risks of a procedure such as an episiotomy must be openly discussed to ensure truly informed consent.

The reexamination of the use of episiotomy that has occurred over the past 20 years underscores both the important role of systematic reviews in stimulating research and an often unappreciated issue in assessing procedures: what should be done with long standing procedures that have never been assessed using an evidence based approach. An important next step with episiotomy is to assess the relevant benefits of the midline versus the mediolateral technique. Randomised controlled trials should be conducted soon and their results disseminated broadly for the benefit of mothers and their children throughout the world.

Stephen B Thacker *director*

Epidemiology Program Office, Centers for Disease Control and Prevention, Atlanta, GA 30333, USA
(sbt1@cdc.gov)

1 Ould F. *Treatise of midwifery*. Dublin: Nelson and Connor, 1742:145.
2 DeLee JB. The prophylactic forceps operation. *Am J Obstet Gynecol* 1920;1:34.
3 Pomery RH. Shall we cut and reconstruct the perineum for every primipara? *Am J Obstet Dis Women Child* 1918;78:211.
4 Thacker SB, Banta HD. Benefits and risks of episiotomy: an interpretative review of the English language literature, 1860-1980. *Obstet Gynecol Surv* 1983;38:6, 322-38.
5 Wooley R. Benefits and risks of episiotomy: a review of the English language literature since 1980. *Obstet Gynecol Surv* 1995;50:806-35.
6 Carroli G, Belizan J. Episiotomy for vaginal birth. In: Cochrane Collaboration. *Cochrane Library*. Issue 2. Oxford: Update Software, 2000.
7 DeLancey JOL. Childbirth, continence, and the pelvic floor. *N Engl J Med* 1993;329:1956-7.
8 Thorp JM, Jr, Yowell RK. The role of episiotomy in modern obstetrics. *N C Med J* 2000;61:118-9.
9 Coats PM, Chan KK, Wilkins M, Beard RJ. A comparison between midline and mediolateral episiotomies. *Br J Obstet Gynaecol* 1980;87:408-12.
10 Werner CH, Schuler W, Meskendal I. Midline episiotomy versus medio-lateral episiotomy. A randomized prospective study. *Int J Gynaecol Obstet* 1991;Book 1:33 (Proceedings of 13th World Congress of Gynecology and Obstetrics (FIGO), Singapore 1991.)
11 Larsson PG, Platz-Christensen JJ, Bergman B, Wallstersson G. Advantage or disadvantage of episiotomy compared with spontaneous perineal laceration. *Gynecol Obstet Invest* 1991;31:213-6.
12 Banta HD, Thacker SB. Once is not enough: reassessment of health care technology. *JAMA* 1990;26:235-40.

Fix what's wrong, not what's right, with general practice in Britain

It has provided better health than government spending deserves

British primary care is said to be the envy of the world. The spirit of experimentation anchored to a sound foundation of care led by general practitioners provides other countries with examples of accessible services, continuity of care, and innovative payment systems. Although Britain's healthcare statistics are not the best in the world they are far better than expected given the comparatively low funding of the healthcare system and the relatively inadequate systems of social support. Seen from the outside, Britain has clearly done something right with its National Health Service, which is based on and increasingly strengthened by its infrastructure of primary care.

The key features of a strong, functioning primary healthcare system are the ability to provide continuity of care and a comprehensive financing system. Until now continuity of care has existed in the United Kingdom because every patient is registered with a general practitioner (a patient list system). People thus have the possibility of developing a long lasting relationship with a general practitioner of their choice, increasing the likelihood of satisfaction among patients.[1] A relationship based on personal doctoring has multiple functions: it serves as the first filter for identifying new health problems, it serves as a place where advice on health issues can be given, it provides an opportunity for comprehensive management, it contributes to the cost effective use of resources, and it provides support and advocacy for the patient.[2,3] Some would argue that there is little evidence for the benefits of this system, particularly as regards cost effectiveness; this is not so. In the United States, a three year review of all the claims made by a random sample of patients aged 21 years and younger who were covered by Medicaid, the publicly funded US programme that provides health care to poor people, showed that being cared for by the same practitioner over time was associated with a reduction in hospital admissions and overall costs.[4] Another more general study showed that people who see the same practitioner over 12 months have significantly lower rates of hospitalisation in the subsequent year.[5] A recent study also found that continuity of care in a general practice is one of the most important variables affecting the total costs of primary health care, taking into account differences in morbidity and other factors known to influence the use of health care (De Maeseneer et al, unpublished data).

Several of the proposed changes to the NHS cut directly across this evidence of the quality and cost effectiveness of maintaining long relationships in primary care. Dual registration—in which patients register with one general practice at work and one at home—would dilute the essential longitudinal relationship between one primary care advocate (be they a general practitioner or a practice nurse) and the patient. Certainly, there are technical solutions that would allow information from the patient's records at both surgeries to be merged, but the real integration of such information and the building of trust take place in the personal meeting between the patient and the general practitioner. The NHS is expanding the provision of walk-in centres and phone lines staffed by nurses without evidence that they improve health or are cost effective.

To destroy the foundation of good primary care by setting up "docs in boxes" and freestanding "emergicentres" can only detract from what everyone admires about the British healthcare system. Primary care was

BMJ 2000;320:1616–7