Elective episiotomy in perspective

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Summary

In view of the present questioning of interventive obstetric practices such as the elective performance of episiotomy, the putative advantages of episiotomy are critically analysed. Recent prospective randomised studies support the growing body of evidence that the value of elective episiotomy is yet to be substantiated.

Elective episiotomy under scrutiny

The value of episiotomy to expedite delivery in the presence of fetal distress or maternal ill-health or exhaustion; to reduce pressure on the specially vulnerable fetal head in premature and breech delivery; to facilitate operative delivery; or to facilitate delivery when the possibility of third-degree perineal laceration is particularly high, such as in the case of an unusually large baby or malpresentation; has not been seriously challenged. What has recently come under scrutiny is the evidence in support of the benefits claimed for episiotomy performed as an elective measure during uncomplicated childbirth, as well as the possible harmful effects of the procedure.

Such queries have relevance since in current obstetric practice episiotomy is used almost as a routine procedure in primigravidas, its incidence having risen from 21% in 1958 to 91% in 1978 in the UK. In an extensive review of the English-language literature from 1860 to 1980, Thacker and Banta concluded that there is no clearly defined evidence of the efficacy of episiotomy, that postpartum pain is increased after episiotomy, and that serious complications may occur. They called for controlled trials of episiotomy, and two such trials published during 1984 will be referred to later.

Does episiotomy prevent genital prolapse?

The claim that episiotomy prevents damage to the pelvic floor is not consistent with the concept that it substitutes a clean incision for an otherwise ragged tear of equivalent proportions. Presumably if the extent of laceration and episiotomy are equivalent, their repair should give equivalent results in terms of pelvic-floor strength. To prevent stretching of the pelvic floor episiotomy would have to be performed before significant descent of the fetal head. In fact, standard texts on episiotomy invariably stress the importance of waiting until maximal stretching of the perineum has occurred before making the incision, since earlier episiotomy may result in excessive bleeding. Episiotomy as generally practised does not, therefore, prevent pelvic-floor stretching.

As for scientific evidence that episiotomy prevents prolapse, there is none of which we are aware. The question was properly addressed for the first time in the West Berkshire perineal management trial, in which 1000 women were randomly allocated to a restricted policy of episiotomy for fetal distress only, and a liberal policy of episiotomy to prevent anticipated perineal laceration. At 3 months postpartum there was no difference in the incidence of stress incontinence between the groups. The 3-year follow-up of these women promised by the authors may definitively answer the question concerning later genital prolapse.

While studies not prospectively randomised are subject to selection bias, it is interesting that a recent evaluation showed no significant difference in perineal function after caesarean section, vaginal delivery with episiotomy, second-degree tear or intact perineum, forceps delivery with episiotomy, or nulliparous controls. Significantly better perineal function was found in women who undertook regular pelvic-floor or general exercise, irrespective of the method of delivery. The concept that perineal function is more dependent upon dynamic use of the pelvic-floor musculature than on the anatomical effects of childbirth is further supported by the clinical observation that women with unrepaired third-degree tears, who depend upon voluntary levator ani tone to maintain faecal continence, rarely develop genital prolapse.

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Does episiotomy prevent fetal damage?

It may be argued that episiotomy prevents fetal damage either by reducing the pressure exerted by the perineum on the fetal head, or by shortening the second stage of labour. For the first objective to be effective, episiotomy would have to be performed before significant pressure of the fetal head by the perineum takes place which, as mentioned above, is advised against in most texts.

Concerning the length of the second stage of labour, it is interesting that progressive deterioration of the fetal condition has been demonstrated only in association with obstetric interventions which have accompanied the trend towards insistence on a speedy delivery, that is the dorsal position7 and forced bearing-down efforts.10 In a randomised study of hurried compared with unhurried second stage labour in women with epidural analgesia, Maresh et al.11 found fewer forceps deliveries and no difference in fetal condition in the latter group in spite of allowing carefully monitored second stages of up to 4 hours. In two prospective randomised studies of episiotomy,12 no difference in neonatal outcome was found between liberal and restrictive episiotomy policies.

Is episiotomy more easily repaired than second-degree tear?

The only randomised controlled trial known to the authors which addresses this question is the West Berkshire trial,7 in which the restrictive policy group (10% episiotomy, 56% perineal tear) compared with the liberal policy group (51% episiotomy, 25% perineal tear) required 100 fewer packs of suture material and 13 fewer hours for repair of the perineal trauma.

Does episiotomy heal better than second-degree tear?

Episiotomy has been reported to be associated with significant postpartum pain and dyspareunia.13 In the West Berkshire trial7 there was no difference between the two groups in perineal pain at 10 days and at 3 months after childbirth. In the randomised study at the Rotunda Hospital, Dublin,12 there was no difference in perineal pain, bruising, swelling and healing in women with episiotomy compared with second-degree tear. A separate group, who were identified as faring particularly badly in this respect, were those with episiotomy performed under epidural analgesia.

Poor healing and perineal discomfort appears to be a problem specific to mediolateral episiotomy. Coats et al.14 found unsatisfactory healing to occur less frequently after midline episiotomy, which more closely resembles spontaneous perineal laceration. Discomfort may also be influenced by surgical technique15 and choice of suture material.5,16

Does episiotomy prevent third-degree perineal laceration?

Third-degree perineal laceration, once a serious complication is, with modern methods of management, successfully repaired in nearly 99% of cases.3 In the two randomised trials referred to above,7,12 the rates of third-degree tear in the restricted episiotomy groups were 0.2% and 0%, and in the liberal episiotomy groups 0% and 6% respectively. More recently Beukens et al.17 reported on the relationship between episiotomy and third-degree perineal tear in a survey of 21 278 singleton deliveries in ten Belgian hospitals. The incidence of episiotomy was 28.4%. Third-degree tears occurred in 1.4% of deliveries with episiotomies and 0.9% of deliveries without episiotomy. However, when a subsample of spontaneous occipito-anterior deliveries was studied, and after stratification for birthweight and parity, no relation between episiotomy and third-degree tear was found. These findings do not support the concept that routine episiotomy prevents third-degree perineal laceration.

Does episiotomy prevent impairment of coital function?

In the West Berkshire trial,7 significantly more women in the restrictive episiotomy policy than in the liberal policy group had resumed intercourse 1 month after childbirth. In another randomised study,11 scarring was more noticeable and intercourse resumed later after mediolateral than midline episiotomy, which more closely resembles spontaneous laceration.

Unfortunately, no long-term studies have, to our knowledge, been published. We are at present undertaking such a study. While the possibility of selection bias cannot be ruled out because of the retrospective nature of our study, we have been impressed by the fact that whereas at 3 months no differences were reported, 1-2 years later 23% women with episiotomy and none of 13 with second-degree perineal laceration reported dyspareunia, and sexual enjoyment was also significantly impaired in the episiotomy group.16 To the best of our knowledge, no one has investigated the male partner’s assessment of coital function after childbirth.

Conclusions

If elective episiotomy does indeed confer any of the benefits conventionally ascribed to the procedure, properly controlled evidence for such benefit is yet to emerge. Many women are strongly opposed to the performance of elective episiotomy.18 Indeed, in our experience many women approach childbirth with greater fear of being subjected to episiotomy than of the labour and birth. The possibility that episiotomy may be necessary because of specific complications should be carefully explained. However, to justify insistence on routine, elective episiotomy in these circumstances would require clear evidence of the benefits of the procedure. It is the responsibility of the proponents of elective episiotomy to provide such evidence.

REFERENCES

Intramuscular buprenorphine compared with morphine for postoperative analgesia

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Summary
The postoperative analgesic efficacy of buprenorphine (Temgesic; R & C Pharmaceuticals) 0.004 mg/kg and morphine 0.15 mg/kg were compared in 60 patients, both agents given by intramuscular injection. According to patients, buprenorphine gave better analgesia. There was no difference in the number of analgesic injections the two groups received in the 24-hour postoperative period. Cardiovascular and respiratory systems were not depressed by either drug. Side-effects were not marked, nausea being the most common in both groups. Morphine had a greater effect on the mood of patients. Buprenorphine proved a satisfactory analgesic for postoperative use by intramuscular injection.

Morphine has been a standard postoperative analgesic for many years. However, as a result of its potential for abuse and its tendency to cause respiratory depression, the search has been widened for safer agents. Agonist-antagonist agents have less chance of causing these unwanted side-effects. This new group of drugs has agonistic action at some opiate receptor sites and antagonistic action at others, the so-called dualism effect. This is said to explain the ceiling effect on respiratory depression and may explain the ceiling effect on analgesia. It can be given by intramuscular or intravenous injection.

In order to ascertain whether this agent has advantages over the time-tested morphine, a clinical trial was conducted to compare these two agents in a busy hospital environment.

Patients and methods
Patients over the age of 18 years graded as 1 or 2 on the American Society of Anesthesiologists’ scale scheduled for laparotomy or orthopaedic surgery were selected for this study. They were assigned to one of two groups by blind-card draw until there were 30 patients in each group. At a pre-operative visit it was explained that analgesic efficacy was to be investigated in the postoperative period and the methods of assessment were discussed.

As premedication, diazepam 0.15 mg/kg was given orally 2 hours before operation. A pentothal induction was used and suxamethonium 1 mg/kg was used for intubation. Maintenance of anaesthesia was achieved with nitrous oxide, oxygen and halothane, muscle relaxants being used where indicated. Thirty minutes before the end of anaesthesia, a single dose of the test agent was given intravenously. Thereafter, postoperative analgesia was given at the request of the patient — 0.15 mg/kg morphine in one group and 0.004 mg/kg buprenorphine in the other. In both groups the analgesic was administered postoperatively by intramuscular injection into the gluteus maximus.

The ward nursing staff noted blood pressure, pulse and respiration 2-hourly for 24 hours, baseline readings being those taken at 06h00 before surgery. Sedation and nausea were graded 2-hourly on 4-point scales (sedation: awake (1), drowsy (2), asleep (3), unrousable (4); and nausea: nausea (1), vomited 1-2 times (2), vomited 3-10 times (3), vomited >10 times (4)). Side-effects, especially urticaria and urine retention were looked for. The number of injections given in the first 24 hours was noted.

Twenty-four hours postoperatively all patients were visited by two of the investigators (K.P. and H.B.) who were not aware of which analgesia the patient had received. The maximum and minimum pain experienced during the test period was assessed by the face scale (FS) and by the visual analogue scale (VAS). Mood changes following analgesia were assessed as unchanged, feeling good or feeling bad. Statistical analysis was done by the chi-square test. A P value of < 0,05 was taken as significant.

Results
The two groups were comparable for sex, age, weight, duration of anaesthesia and operations performed. The maximum pain felt in this period assessed by the FS is shown in Table I, with buprenorphine significantly better than morphine (P < 0,05). The VAS also showed a significant difference (P < 0,05) between the two groups in the maximum pain experienced (Table II). The number of patients assessed on this scale is low as only those who clearly comprehended this method were used for statistical analysis.

There was no significant difference in minimal pain levels experienced between the groups, or in the number of injections