THE VALUE OF A MORE FREQUENT EMPLOYMENT OF EPISIOTOMY IN THE SECOND STAGE OF LABOR

BROOKE M. ANSPACH, M.D.
Philadelphia

IMPROVEMENTS IN OBSTETRICAL TECHNIC IN GENERAL. The recent interest of the laywoman in the course of labor brought about by various articles on "twilight sleep," will have one considerable benefit in the practice of obstetrics. It will bring more forcibly than ever to the notice of the profession, that the woman in labor deserves to have her suffering reduced to a mininum, and that it is an untenable position to assume that labor is indelibly associated with ills which must be endured.

It is unnecessary to dwell upon the measures which are in vogue at present to relieve the agony of labor. In the second stage ether affords a safe and sure relief. What scopolamin and morphia will do for the first stage is still a matter under trial.

It should be the aim of the obstetrician to so perfect his practice that labor may be made more and more a process which need not be looked upon with dread and need not be followed by physical incapacity.

While the more urgent obstetrical questions have everywhere been given serious thought, some of the ones less pertinent to the life of the mother and the safe delivery of the child, and yet of considerable importance to their well-being

and comfort, have not received the attention they deserve. I refer particularly to the avoidance of the injuries to the perineum which seem all too frequently a certain heritage of labor.

We all endeavor to prevent perineal laceration; we all repair such lacerations at once, or within a week, and yet, do we not all have patients who, in spite of this care, have relaxation of the pelvic floor and require treatment or operation subsequently?

FREQUENCY OF INJURY TO THE PERINEUM. The frequency of perineal injury in so-called normal labor is higher than we might anticipate. The methods employed to prevent perineal tears have three objects: (1) slow dilatation and stretching of the perineum; (2) the avoidance of precipitate expulsion; (3) the maintenance of the smallest diameters of the fetal parts at the vulvar outlet. The result of these measures is partially good. They prevent in some cases injuries which would otherwise occur, and they probably limit in all cases the extent of the injury. Nevertheless, in a large proportion of primipara, perineal tears occur no matter what method is employed to prevent them.

It can scarcely be expected that injury to the perineum be uncommon in primipara. The mucous membrane of the vaginal sulci is capable of considerable stretching, and so are the transverse perineal and the levator ani muscles, but the fascia of these muscles and the triangular ligament exhibit this property only to a moderate extent. The fascia plays an important part in the support of the perineum. The tonicity of the perineum depends upon the fascia. The muscles act largely when there is some strain imposed upon the perineum, as in defecation, heavy lifting, coughing, etc., whereas the fascia affords a constant support. It is evident, therefore, that if the fascia is torn, even without muscular involvement, the strength of tbe perineum will be impaired.

There is little doubt, however, that in a large proportion of

primipara both the fascia and the muscles are over-stretched or torn. There is such a disproportion between the fascial boundaries of the outlet and the diameters of the fetal head. The muscles may stretch, but there is usually some rupture of the fascia even in the most favorable cases. If the disproportion is greater, the muscles are ruptured. These injuries may take place before there is any laceration of the mucous membrane, and, except in the median superficial tears involving the fourchet and perineal body, they probably precede the laceration of the mucosa.

It is hard to judge tbe frequency of perineal injury in primipara from the published reports. There is so much difference in the judgment of those making the observations. In private practice I have attended and had the subsequent care of about 100 primipara. In 70 per cent. of the primipara, in spite of anesthesia and measures to prevent injury to the perineum, sutures were necessary. The exact proportion of the patients who had a relaxed perineum as a result of their labor, I do not know, but I recall sufficient of them to feel that the treatment was not in all cases what it might have been.

I have done primary perineorrhaphy under the most favorable surroundings—plenty of light, plenty of help, all the conditions which obtain in a well-appointed operating room, and yet been disappointed in the result. I attribute the misfortune to the fact that, although the fascia and muscle visibly torn and exposed in the wound were brought together, other ruptured and overstretched parts remained unrecognized. To accurately estimate, locate, and expose such submucous injuries at the close of labor, with any degree of uniform success, is a very difficult and sometimes well-nigh impossible task.

Primary suture of the perineum at the close of labor is often a failure. To show that this statement is true, I need only mention that in some hospitals immediate perineor-

rhaphy has been given up as unsatisfactory, and the patient is kept until the swelling and acute evidences of trauma have subsided, at which time deeper relaxation of the muscles and fascia can be recognized and denudations made if necessary to expose the injured parts. The results of these secondary or intermediate repairs is vastly superior to the primary.

Episiotomy. It has often struck me forcibly while attending a woman in the second stage of labor, who was repeatedly suffering with each uterine contraction from the resistance which the perineal floor interposed to the presenting part, when these structures were in great danger of being overstretched or lacerated, that I was deliberately allowing an injury to occur which might be prevented. I have asked myself the question when the head was bulging the perineum, when the anal mucous membrane was being exposed with each pain, and when the vaginal outlet seemed so totally disproportionate to the baby's head that the uninitiated would surely say that it could never pass that outlet—whether the sensible plan would not be to divide the perineal structures in one sulcus to one or the other side of the anus and allow the head to emerge without delay and with the substitution of a clean cut for hidden and submucous and irregular lacerations. This operation, known as episiotomy, I believe has a very distinct place in the conduct of labor, when the disproportion between the vaginal outlet and the presenting part is so great that something must give way before the child is born. The immediate suture of a clean cut with all the structures injured exposed in that cut, will give a good result almost invariably. This practice saves the patient pain, reduces the amount of ether, lessens fetal mortality, especially in breech and forceps cases, and leaves the perineum as sound as it was before labor.

Is it rational to allow perineal lacerations to occur? Should

we permit an injury that may lead to physical incapacity? Would it not be better to divide the obstructing parts with a clean incision? No more asepsis is required than in the proper conduct of labor, and it is easier to close an episiotomy wound successfully than to judge the extent of a perineal rupture and perform a satisfactory repair.

The operation should be done when the head is bulging the perineum, but before the vaginal orifice has been subjected to an excessive amount of stretching. If in the course of a few pains the vaginal orifice appears to dilate easily, if the perineum is elastic and there is no such disproportion that a tear is inevitable, the operation need not be performed; but in those cases in which the ring of the vaginal orifice is very tense, the perineum thick and rigid, the head much larger than we could hope the orifice to pass without tearing, then an early episiotomy will beof advantage.

Episiotomy will be most frequently indicated in forceps operations, delivery with the occiput posterior, and breech presentations.

In difficult forceps cases there is more than the ordinary risk of rupture of the perineum. The use of the instrument increases slightly the diameter of the passenger and the delivery is, and often must needs be, more rapid than normal. I have repeatedly gone on with such a case realizing that every pull increased the damage to the perineal floor, but relying on the subsequent perineorrhaphy. In this trust, however, I have sometimes been sorely disappointed, and now during the course of a forceps operation, when rupture of the perineum appears inevitable, I promptly do an episiotomy, and so far as there has been no occasion to regret it.

Delivery with the occiput posterior produces an extraordinary strain upon the perineum which not infrequently results in a complete tear. With such a position of the occiput episiotomy is nearly always indicated.

In breach cases, the primiparous perineum sometimes

offers considerable resistance to the after-coming head. It has been my custom to have forceps ready to use on such occasions if the ordinary methods of delivery are not quickly efficient. With the forceps one can always be sure of overcoming the resistance of the perineum without excessive pull on the baby's jaw or excessive suprapubic pressure, but the perineum is frequently sacrificed. Both the use of the forceps and extensive ruptures of the perineum may be prevented by an episiotomy incision. The perineal ring then offers no impediment, and the after-coming head can be extracted without marked resistance from the perineal floor.

The regard in which episiotomy has been held generally, is not high, and this opinion is the result possibly of a misconception of the operation. Those who have little or no regard for it, view episiotomy as a slight nicking or cutting of the vulvar ring at right angles to its circumference, at a time when the orifice is already enormously dilated. Such a procedure does scarcely anything more than prevent a tear of the mucous membrane. The fascia and muscles beneath are already overstretched and torn before it is undertaken.

The operation of episiotomy which will be of service, is a division of the vulvar ring from one sulcus downward and obliquely outward on a line between the anus and the tuber-ischii. This incision divides the pelvic fascia, the constrictor vagina, the transverse perineal muscles, and a part of the levator ani.

Episiotomy was spoken of by Lusk as the operation of the young obstetrician.

Crocket[1] says: "The less experienced the obstetrician, the more likely is he to perform episiotomy."

Hirst[2] remarks: "I have no confidence in it whatever, as I believe it to be based upon an incorrect idea as to the mechanism of pelvic tears."

[1] Peterson's Practice of Obstetrics Philadelphia, 1907.

[2] Text-book of Obstetrics.

Tweedy and Wrench[1] declare: "We do not recommend episiotomy. You cannot be sure whether the perineum is going to tear or not, and if it does tear, when stitched, it will heal as well as if cut with scissors. In very rare cases the tear of the perineum begins in the neighborhood of the anus and is apt to extend backward and forward. If this occurs, episiotomy would save laceration of the rectum."

Williams[2] gives it as his opinion: "Many authorities, when rupture of the perineum seems imminent, advise episiotomy. Personally, I see no advantage in the procedure, as my experience is that ordinary perineal tears will heal almost uniformly if properly sutured and cared for."

Edgar[3] states: "It (episiotomy) is seldom necessary, however, and in the absence of cicatricial contraction better results will usually be obtained by awaiting the natural process of dilatation."

There is a different note, however, in the opinion as expressed by other writers.

Berkley and Bonney[4] declare: "When a tense perineum is obstructing labor and it appears impossible for the head to be born without an extensive rupture, the latter may be minimized by deliberately dividing the perineum with scissors on one or both sides of the middle line."

Grandin, Jarnin, and Marx[5] note: "If it is evident that perineal laceration is impending, it is better to at once perform episiotomy. This little operation is, no doubt, worthy of more consideration than it has ever received. Excessive rigidity may lead to protraction of the stage of final expulsion. The vulvar cleft may be actually too small to allow of the expulsion of the presenting part, even though there be no

[1] Practical Obstetrics, London, 1910.

[2] Obstetrics, New York, 1912.

[3] The Practice of Obstetrics, Philadelphia, 1906.

[4] Difficulties and Emergencies of Obstetrical Practice, Philadelphia, 1915.

[5] Text-book on Practical Ob tetrics, Philadelphia, 1909.

impediment from the side of the pelvis; or else the muscles and the fascia may be excessively rigid, in which case, in order to avoid deep laceration, it may be necessary for the attendant to interfere by the performance of episiotomy."

Jellett[1] states: "There is no doubt that the clean-cut incision will in some cases be smaller and will heal more readily after suture than the large laceration which might otherwise result, and further, that such an incision may save the involvement of the rectal wall or sphincter ani."

Webster[2] declares: "When it is certain that rupture is likely to occur, the operation of episiotomy may be employed."

Davis[3] is still more favorably inclined and says: "The reasons against its use lose weight entirely. Episiotomy is especially serviceable in forceps delivery where the head is evidently too large to be brought through the vulva without laceration. Its performance will frequently save a tear of the pelvic floor in the lateral sulci and prevent a central tear of the perineum."

Jewett[4] says: "No method yields better results for the ultimate integrity of the perineum than episiotomy rightly timed and properly executed. The ultimate condition of the pelvic floor after episiotomy, correctly performed, is even better than after many natural deliveries in which the parts escape rupture. The tonicity of the structures frequently remains as perfect as in the non-parous woman. The success of the incisions in preventing lacerations depends, as already intimated, as upon so timing them as wholly to anticipate the tearing and upon carefully adjusting the location and direction of the cuts. This apparent simple procedure, therefore, is one in which even the accomplished obstetrician may find room for the exercise of skill."

[1] Manual of Midwifery, London, 1910.
[2] Text-book of Obstetrics, Philadelphia, 1913.
[3] A Treatise on Obstetrics, Philadelphia, 1904.
[4] American Text-book of Obstetrics, 1902.

De Lee[1] remarks: "When a tear of the perineum appears inevitable, the question arises, Shall it be allowed to occur spontaneously and go in whatever direction it may, or shall we seek to anticipate it or at least divert it away from the sphincter into unimportant structures?"

The value of the operation and the frequency with which we must use it depend upon how often perineal injuries occur during labor, and how easy it is to repair them. DeLee voices my own sentiments when he declares that an anatomical study of the pelvic floor after delivery always shows evidences of "injury to all its structures; the connective tissue is torn in many places. The layers of fascia are loosened; the levator ani muscle lacerated more or less; the urogenital septum is *always* ruptured, the perineal body frequently, and all the tissues are bruised, showing larger or smaller hemorrhages and sugillations. The later results of these macroscopic and microscopic injuries are shrinking and atrophy of the pelvic diaphragm, relaxation of the same, prolapse of the urethra, vagina, bladder, uterus, all depending upon the extent of the traumatism." He says: "In my own practice, an absolutely anatomically intact perineum is a great rarity, but extensive lacerations are uncommon because I use episiotomy often."

In regard to the technic of episiotomy, it is generally recommended to divide the tissues with scissors, which may be especially constructed—heavy and round-pointed. I believe this practice inferior to the use of the ordinary scalpel or probe pointed bistoury, protecting the head by two fingers inserted within the vaginal orifice, one on either side of the projected incision. The necessity for the operation having arisen and the decision to employ it made, the patient may be given enough ether to benumb her sensibilities, the advancing head pushed back slightly, and the

[1] The Principles and Practice of Obstetrics, Philadelphia, 1913.

operative field washed with sterile soap and water and bichloride solution. The incision is then made in the manner already indicated, one sweep of the knife being better than a succession of cuts, and the sphincter ani being avoided by pushing it to one side with the thumb applied to the skin surface of the perineum. After the incision is made, the bleeding is controlled temporarily by gauze pressure. The next pain usually engages the presenting part in the wound, and delivery is effected in a very few minutes. While the accoucher is awaiting the completion of the third stage, any oozing may be controlled by catching the bleeding point with an artery forceps, gauze pressure, approximating the edges of the incision with tenacula or manual pressure. In closing an episiotomy incision, the deepest parts of the cut must be exposed and brought together with buried catgut sutures. One must be particularly careful in deep episiotomy wounds to reattach the lateral structures to the central ones. In addition to the deeper buried sutures of catgut, one or two relaxation sutures of silkworm gut embracing the entire area of the incision should be employed. The mucosa and skin edges should be approximated by interrupted sutures of silkworm gut.

The subject of episiotomy may appear to be a very unimportant one, and yet, in actual practice, what a considerable time and trouble is given by the obstetrician to the avoidance of perineal injury by securing the slow delivery of the presenting part in the best position possible. In spite of this care, are we not frequently disappointed in the ultimate result. No sutures may be required, but just the same the patient has a relaxed vaginal outlet, and possibly later, cystocele and rectocele. Is it not worth while, therefore, to consider episiotomy seriously? Will not this operation also reduce somewhat fetal mortality and maternal morbidity? Is it not to every practitioner of obstetrics, a question much more frequently pertinent than the larger operative problems

of pubiotomy, Cesarean section, and the use of the obstetric forceps?

To sum up my own feeling in the matter, and to serve as a basis for discussion, conclusions may be drawn as follows:

1. The customary methods in obstetrics do not prevent a large number of perineal injuries which require treatment subsequently.

2. Episiotomy will reduce the physical incapacity following labor.

3. Episiotomy, by facilitating delivery, will reduce infant mortality and maternal morbidity.

4. The recognition of a method which no practitioner of obstetrics can afford to neglect should be given to this simple operation.