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# MIDLINE EPISIOTOMY*

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THE claim that midline episiotomy is more comfortable than mediolateral constitutes a challenge. The impression is so prevalent that several texts express preference for the midlocation if satisfactory healing can be assured. It has been our experience that the midline is safer and more satisfactory than the other approach.

Strict adherence to all surgical principles is important in obstetrics. The employment of aseptic technique is indispensable. Sharp dissection of tissues, complete hemostasis, and careful apposition of tissues by nonconstricting sutures remain pertinent points. Improvement in methods and the adoption of new ideas and materials to replace less valuable procedures mark the progress of the times. The fields of preoperative sedation and anesthesia are notable examples. Stay sutures embracing large volumes of tissue are gradually being discarded, and the trend is now toward the use of finer suture material.

Division of perineal structures by a sharp scalpel offers less tissue insult than the crushing effect of scissors. Contusion of tissues by blunt instruments is a source of pain. Such devitalized tissue margins offer a nidus for infection. Edema and swelling are natural companions. Less perineal scarring and more rapid healing are additional merits of sharp dissection.

Mass ligation of tissue with through-and-through sutures favors pocket formation with retention of old blood. This is particularly important because the perineum is a contaminated field and care must be taken to obliterate all dead spaces. Accurate anatomic apposition of tissues promotes the healing process and discourages the onset of infection.

The perfect suture material has never been developed. It has long been recognized that buried catgut is a tissue irritant, and for some

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time it has been suspected that it is a factor in the dehiscence of episiotomy wounds. Suture material is constantly being improved. The recent standardization by the United States Pharmacopoeia is an important step in the right direction. For the first time this gives us an opportunity to compare accurately the results obtained by different observers. Adoption of the United States Pharmacopoeia standards by all manufacturers will facilitate further comparison.

We believe that adherence to each one of these surgical principles is fundamentally important in perineal surgery. Numerous authors have emphasized one or more of these points. The earliest writers on episiotomy advocated a knife-edge for making the episiotomy wound.

Rucker[1] has pointed out in a detailed history of episiotomy that the blunt-pointed bistoury was one of the first instruments used. Pieri[2] and Gillis[3] have recently stressed to the obstetrician the importance of anatomic knowledge of perineal structures. Pieri,[2] Royston[4] and others have called our attention to the use of fine catgut. Phaneuf[5] has pointed out the importance of layer suturing. The edema and swelling of the perineum following episiotomy and repair are recognized by all as a source of discomfort. To accommodate for this edema a method using a continuous knotless suture for reconstructing the perineum has been outlined recently by Rucker.[1]

We are in accord with the various procedures just cited but wish to emphasize the importance of using them all.

For several years we have been using smaller and smaller catgut with increasing satisfaction, and for the past three years we have used five-0 chromic catgut for repair of episiotomy wounds. All incisions are made with a scalpel. Small bites of tissue with complete hemostasis and accurate anatomic apposition of tissue is practiced. We wish to stress that we are presenting nothing new, but feel that the suture material, recently made available, efficiently adapts itself to improved obstetric care. A simple method is presented which, we believe, offers both objective and subjective improvement.

## METHOD

The perineum is allowed to bulge before the episiotomy is elected. We prefer to wait for this stage for two reasons: First, an episiotomy may not be necessary; and second, the pressure of the presenting part thins the perineum and demarcates the structures. A sterile wooden tongue depressor is then slipped into the vagina between the presenting part and the perineum. Pressure is maintained on the fundus to keep the perineum bulging. With a sharp scalpel the incision is begun at the level of the transverse muscle bundle. The incision is continued through all the structures until the scalpel meets the tongue depressor. Care is taken to sever the vulvar ring and the fascia over the anterior and posterior surfaces of the transverse perineal and sphincter muscles.

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The episiotomy is repaired after completion of the third stage. Small, round-pointed needles threaded with five-0 chromic catgut are used. The fascia layers are identified and brought together with interrupted sutures embracing small bites of tissue. Particular attention is given to the fascia over the transverse muscle bundle. Care is taken to preserve the triangular shape of the perineum. Complete hemostasis and obliteration of dead spaces are practiced. The vaginal mucosa and skin are closed with interrupted buried sutures.

The aftercare consists of drying the perineum with a sterile towel and protecting it with a sterile pad. A pitcher douche is given after defecation or voiding. If the bowels have not moved by the third day, an enema is given.

## DISCUSSION

The efficiency of midline incisions was pointed out in 1918 by Pomeroy.[6] That this site is the natural cleavage plane is stressed by the frequency of spontaneous lacerations in this location. Permanent injury to muscle fibers can be prevented by a well-timed midline episiotomy. The objection to midline episiotomy is the risk of extension into a third-degree laceration. The misfortunes of this complication have been greatly exaggerated. Pomeroy,[6] Royston[4] and others have already shown that a third-degree laceration of the perineum, when properly repaired, heals as readily as if the muscle were not torn. We share this opinion. Since using five-0 chromic catgut for repair, we have had ten cases of third-degree extension of midline incisions. There was no morbidity in any case and extended hospitalization was not necessary. Subsequent examination has shown adequate sphincter control with a well-supported perineum.

The use of the wooden tongue depressor for protection of the presenting part is simple and efficient. The resistance necessary for making the incision with adequate protection to the baby is well provided. Pressure from within aids in demarcating the structures to be incised.

A scalpel is used to incise the perineal body. Directing the knife-edge accurately in the midline insures cutting the fascia in the natural plane of cleavage. The additional space made available by incising the fascia of the transverse muscle bundle is considerable. The pressure of the presenting part forces the fascia edges laterally while the muscle stretches without tearing. The clean-cut edges facilitate closure. Because of the delicate caliber of the suture material, numerous sutures can be placed in a given area without fear of overcrowding with foreign material. The use of small needles (Murphy intestinal No. 4) encourages little additional trauma. Less pain results from the use of submucosal and subcutaneous sutures and permits early sealing of the incision, preventing contamination and reducing the pain. Bower, Burns and Mengle[7] recently published their results with five-0 chromic catgut for gastrointestinal surgery. The reduction in tissue edema, ecchymosis, and local sloughing with

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marked improvement in healing was well demonstrated. This corresponds to our findings over the past few years.

Over 300 patients treated by this method are available for study. The most notable improvement has been in the reduction of perineal pain following delivery. We attempted to obtain as reliable data as possible concerning perineal discomfort. However, subjective responses of patients do not lend themselves well to scientific analysis. We found only an occasional patient who experienced sufficient pain to require treatment. This discomfort was readily relieved by light therapy. All cases healed promptly. No morbidity attributable to episiotomy was evident. Post-partum examination has yielded gratifying results. The decrease in scar formation has been notable. Good perineal reconstruction has been the rule.

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## DISCUSSION

DR. M. PIERCE RUCKER, Richmond, Va.—As much as I dislike the word routine, I do an episiotomy almost routinely in premature deliveries. I do it here for the baby's sake and in the full-term delivery for the mother's sake.

I have not used a knife and the wooden tongue depressor but am inclined to think that it is better than even a sharp pair of scissors. I have reduced the size of the catgut used to "0" and am glad to learn that smaller catgut is satisfactory. I use a continuous suture without knots as that is the only way I have been able to secure accurate apposition without constriction of the tissues when swelling and edema set in.

The only serious disagreement I have with the authors is the site of the incision. I like to keep away from the perianal skin as far as possible. Not only is it surgically dirty, but it is thin and hard to suture satisfactorily. The mediolateral incision gives more room, which is especially helpful when the patient has a funnel or male type pelvis. The disadvantages of the mediolateral episiotomy are more bleeding and possibly an asymmetrical closure. To overcome the bleeding I infiltrate the tissues with novocain and adrenalin. This has the advantage not only of making the procedure less bloody, but it permits one to stop the anesthetic when the head begins to crown. With this plan the babies are wider awake and the uterus has more tone during the third stage. No further anesthesia is needed for the repair. Asymmetry in repair is avoided by accurate anatomic apposition of tissues, and by observing such landmarks as the remains of the hymen, the mucocutaneous junctions and the pigmented skin.

DR. G. D. ROYSTON, St. Louis, Mo.—Midline episiotomy has the advantages of being easier to repair, giving a better anatomic result, and causing decidedly less discomfort. Yet I cannot view with equanimity the harmlessness of the third-degree tear. Among my first five midline episiotomies, two multiparas who delivered spontaneously suffered third-degree tears.

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The midline incision has therefore certain limitations. These limitations are as follows: 1, any apparent disproportion, including a postmature baby or a child which seems to be unusually large; 2, faulty presentations; 3, contracted pelvic outlet where the narrow pubic arch forces the head backward, so that it must be accommodated at the expense of the posterior segment of the pelvic floor; 4, a low perineum, where the distance between the anus and vagina measures less than two inches. Since following these suggestions no third-degree tears have followed midline incisions in my hands.

DR. HODGKINSON (closing).—In looking over some 46 cases of third-degree laceration of the perineum that have occurred in the Henry Ford Hospital during the past several years, it was discovered that the biischial diameter was in the neighborhood of 9 cm. for most cases. This indicates that a contracted outlet is an important factor in the etiology of this laceration.

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