

PROTECTION OF THE PERINEUM DURING PARTURITION.

BY THAD. A. REAMY, M. D.,
Cincinnati.

POSSIBLY an apology is due this Society for taking up its time in the discussion of a subject which has had so much and so distinguished attention from the authorities in obstetrics that it would seem threadbare, and its treatment a work of supererogation.

This apology I make by calling attention to the variance of opinions upon the subject, as expressed by those who write and teach. The subject has been much worked, but can not yet be considered as finished, since there is no agreement. This is more especially true as to treatment. There are few now who oppose any and all methods of support; so likewise there are few who agree as to the *best* methods. As yet, no royal method of universal success has been found. Clinical experience conclusively shows that during parturition, especially in the primipara, the perineum is in danger; that in all countries, in all ages of human history, and under any and every method of treatment yet devised, this danger culminates in injury in a considerable proportion of cases. Statistical statements as to what proportion, are not to be relied upon, and are therefore not here quoted. Moreover, there is probably no accident incident to childbirth which leads directly and remotely to greater evils than this. The more immediate effects of perineal rupture may be hemorrhage, shock, sepsis, death. The remote sequelæ are so numerous and varied as to constitute the basis of much of the invalidism of child-bearing women. This feature of the subject is

so well understood that you will not be detained with it. In consequence of anatomical and pathological conditions, which are occasionally met, perineal rupture in these cases is inevitable. Perfect success in preventive treatment, therefore, can not be confidently hoped for. Nevertheless, in the opinion of the writer, better methods than have heretofore been adopted by the profession generally, with better results, may be expected. He who preserves from rupture a perineum which is in peril shows more skill, consummates higher art, than he who successfully repairs a perineum which has been ruptured.

Prophylaxis has ever been a more humane and more successful means of lessening physical suffering than cure, and public hygiene and sanitation are enrolled among the medical sciences.

METHODS.

The methods of perineal support or protection, as taught, may be divided as follows:

1. Those which aim chiefly to retard the head and prevent its too rapid advance, in order to gain time for adequate perineal relaxation.

As exponents of this class may be quoted Goodell,¹ who holds the head back by placing his thumb against the occiput, while drawing forward the perineum by hooking one or more fingers in the rectum.

E. Warren Sawyer² holds back the head with the forceps, at the same time inducing and maintaining flexion. W. Tyler Smith³ held back the head with one hand, with the other marking the degree of distention. W. A. Duncan⁴ simply applies pressure to the advancing head, with the fingers in the shape of a cone. Hohl⁵ grasps the occiput with the hand, the thumb above and the fingers below, thus holding back the head during a pain.

2. Methods which aim at protection chiefly by applying,

¹ *Am. Jour. Med. Sciences*, 1871, p. 55.

² *Lectures on Midwifery*, p. 365.

³ *Chicago Med. and Surg. Exam.*

⁴ *London Lancet*, 1884, p. 202.

⁵ *Grundriss der Geburtshilfe*.

direct to the perineum, some artificial means of support. As supporters of this practice may be mentioned Robert Barnes,¹ who applies the palm of the hand, so spread out as to rest upon the coccyx behind, and upon the pelvic floor, at the same time pushing up the skin from adjacent parts toward the fourchette. Playfair² places the hand upon the perineum, with the thumb on one side of the vulva and the index-finger on the other side, for the purpose of pushing the perineum forward, with a view to relaxation rather than support, although the latter is aimed at as a minor measure. Ramsbotham,³ resting his elbow upon the bed, placed his hand against the perineum. Gooch placed the palm firmly against the perineum. Gardner's⁴ method is the same as Playfair's, but with a view to support, not relaxation. Baudelocque⁵ firmly supported with the palm of the hand during a pain, and attempted forcible dilatation of the vulvar outlet during an interval. Garrigues⁶ makes moderate pressure with the flat hand, so that the fold between the thumb and finger rests upon the posterior commissure. Niemeyer⁷ recommends pressure on the perineum in the direction of the axis of the inferior strait, more, however, with a view to extension of the head than of direct support. Meigs applied palmar pressure, with a folded towel intervening. Cazeaux,⁸ in the early edition, says: "Press the whole perineal surface equally, and with a moderate degree of force, by the palmar face of the hand." In the last (7th) edition⁹ the views of Goodell are commended, both by Tarnier and Dr. Hess, the American editor. Velpeau¹⁰ advised that the hands should be so placed that the radial side of the forefinger is in relation with the four-

¹ *System of Obstet. Med. and Surg.*, p. 431.

² *System of Midwifery*, 1880, p. 281.

³ *System of Obstet.*, p. 151.

⁴ Tyler Smith's *Lectures on Midwifery*, p. 365.

⁵ *Midwifery*, edited by Dewees, 1823, p. 217.

⁶ *Am. Jour. of Obstet.*, 1880, p. 241.

⁷ *Brit. Med. Jour.*, 1861.

⁸ *Theoretical and Practical Midwifery*, 1871, p. 678.

⁹ *Theory and Practice of Obstet.*, 1884, p. 680.

¹⁰ *Manual of Midwifery*, 1831, p. 348.

chette. Glisan¹ applies the palm of the hand direct to the perineum during a pain. Collins² did the same, except that he used a soft intervening cloth.

3. Methods of support which combine the two classes above named, in that they endeavor to retard the head, and at the same time afford direct support to the perineum.

Dr. Theophilus Parvin³ advocated, in a paper before this Society in 1882, a combined method by applying the concave palm of the right hand to the convexity of the bulged perineum, while the left hand, passed over the right thigh, grasps the head and retards or directs it at will.

Ohailly⁴ placed the patient on her back and passed his right arm under her right thigh, and pressed his palm on the perineum, with the radial border of the index-finger upon the outer border of the perineum, and the thumb extended on the right thigh. He at the same time placed his left arm over the thigh, with the fingers upon the vertex, for retardation and support. This is called the Vienna method.

Schröder⁵ advises pressure upon the head, through the perineum, with the ball of the thumb or the fingers, for both support and retardation.

McGaughey⁶ uses the right hand to support the perineum by placing the palm on the center of that body, with the fourchette between the thumb and forefinger, while the left hand is placed over the thigh, with its palm upon the head and the fingers touching the anterior thinned edge of the perineum, to hold back the head and at the same time to direct it forward.

Lusk⁷ gives direct pressure with the flat hand to the perineum in cases where central perforation seems imminent, and where there is defective elasticity he passes the left hand

¹ *Text-Book of Modern Midwifery*, 1881, p. 397.

² *Treatise on Midwifery*, 1841, p. 10.

³ *Trans. Am. Gyn. Soc.*, 1882, p. 145.

⁴ *System of Obstet.*, 1844, p. 210.

⁵ *Manual of Midwifery*, 1878, p. 93.

⁶ *Am. Jour. Obstet.*, vol. xvii, p. 580.

⁷ *New York Med. Jour.*, 1880, vol. xxxii, p. 595.

between the thighs and presses the head forward and inward, at the same time preventing undue extension by pressing backward through the perineum with the disengaged hand.

Hodge¹ taught that the accoucheur should place the fingers over the posterior commissure of the vulva, so as to give it a firm support; at the same time the fingers of the other hand, upon the occiput, may prevent any sudden exit of the head.

4. Again, there are those who, following neither of the above methods of perineal protection, yet try to accomplish the same result by means of forcible dilatation of the vulvar and vaginal outlets with the finger, at the same time practicing a process of enucleation.

Notably among these are Ritgen, Ahlfeld,² Olshausen,³ Duke,⁴ and Smellie.⁵

5. In this class we place *episiotomy as a preventive means of treatment*. Although strongly urged by high authority, it is probably not adopted by anybody to the entire exclusion of all other means of prevention, and is chiefly retained as a *dernier ressort* in cases of extreme peril.

Everybody has seen deliveries occur where it seemed impossible without tearing the perineum; and to determine what cases demand this operation is absolutely impossible. Indeed, nothing more clearly proves the truth of that aphorism of Victor Hugo, "There is nothing so possible as the impossible." Nevertheless, there may be cases where laceration is so imminent that we are warranted in selecting the site of the apparently inevitable laceration and doing episiotomy. This practice has found able followers in Sir James Simpson,⁶ Cazeaux,⁷ Tyler Smith,⁸ Chailly-Honoré,⁹ Schröder,¹⁰ Thomas More Madden,¹¹ Fordyce Barker,¹² Anna E. Broomal,¹³ and Manton.¹⁴

¹ *Prin. and Prac. of Obstet.*, 1864, p. 192. ² Goodell, *loc. cit.* ³ Goodell, *loc. cit.*

⁴ *Med. Press and Circ.*, London, 1880, p. 431. ⁵ *Treatise on Midwifery*.

⁶ *Obstet. Works.* ⁷ *Loc. cit.* ⁸ *Loc. cit.*

⁹ *Traité pratique de l'art des accouchements*, 1867. ¹⁰ *Loc. cit.*

¹¹ *Am. Jour. Obst.*, 1872. ¹² *Puerperal Diseases*.

¹³ *Am. Jour. Obst.*, vol. xi, p. 517. ¹⁴ *Am. Jour. Obst.*, March, 1885.

6. The last, and numerically least, includes those *total perineal abstainers who let this structure religiously alone*. This practice finds high authority in the writings of Leishman¹ and Hewitt.²

It will thus be seen that by far the greater number of the authorities believe in some method of preservation, and that methods which combine judicious perineal support with simultaneous retardation of the head seem to meet with most favor. The method now to be described and recommended properly comes under the class combining perineal support and control of the head.

Several years ago I adopted this method, which has been so generally successful in my hands that I believed it my duty to call the attention of the profession to it. Accordingly, in the winter of 1881, I illustrated this method upon the manikin before the Cincinnati Academy of Medicine, and a brief report of it was published at the time in the *Lancet and Clinic* under the proceedings of the Academy.

I now beg leave to submit an account of the method, with illustrations, to this Society, in order to secure for it a more general distribution and to solicit your opinions and criticisms.

I have for several years employed this method at the obstetric clinics before the classes of the Medical College of Ohio, as well as in my private practice, and I am persuaded that by its use I have saved many perineæ which, under any other procedure that I had formerly practiced, would have been lacerated. This method, for obvious reasons, is not recommended in all cases, but only in primiparæ or other subjects where the structures are likely to be greatly imperiled.

I usually allow the parturient woman to take a lateral or dorsal decubitus, at pleasure, during the early part of the second stage of labor, and in cases of primiparæ I do not even insist upon the patient lying down at all at this time. However, when the head begins to bulge the perineum, and

¹ *System of Midwifery*, 1879, p. 268.

² *Brit. Med. Jour.*, 1860.

its distention is such as to indicate peril to its attenuated structures, I place the patient on her back across the bed, with her nates brought to its verge, and take my seat at easy distance for the necessary manipulations incumbent upon the accoucheur; then the thighs are flexed upon the abdomen, and the legs upon the thighs, with the knees brought close together. The limbs are held in this position by two assistants—the nurse and husband, or such other persons as may be present, for especial skill is not essential.

These assistants may each sit on the edge of the bed, with their backs toward the patient's head, or, in case a narrow bed can be secured, they may take positions on the opposite side of the bed from the accoucheur, which is preferable, for in this position they can with ease make the necessary traction on the towel or bandage hereafter to be mentioned.

These assistants are then given opposite ends of a towel or bandage of linen, about ten inches wide and forty to fifty inches long, which is carried around the buttocks and spread out smoothly, with its anterior or upper edge on a level with the fourchette. They are then instructed to make traction, during the pains, in such amount, in such direction, and with such part of the bandage as the accoucheur may direct. The direction of traction may be varied at will from a downward and backward to an upward and forward movement.

The following anatomical and mechanical reasons may be given in support of this method of perineal preservation:

The recent investigations of Ranney,¹ D. Berry Hart,² and Savage³ tend to overthrow the prevailing views concerning the muscles of the perineum.

It has been very generally held that the vagina had a proper sphincter, which was in relation with the sphincter ani by a figure-of-eight continuation, and that there was just back of the fossa navicularis a muscular commissure in the center of the floor of the perineal body, which also gave attachment to the transversi perinei muscles. It now seems

¹ *N. Y. Med. Jour.*, 1882. ² *Atlas of Female Pelvic Anat.*, plate xix.

³ *Papers on the Female Perineum.*

well established that there is no such fortunate decussation just behind the fourchette, for if there were this would be the strongest point of the perineum, and not the weakest, as is shown by the clinical evidence of its frequent rupture at this point.

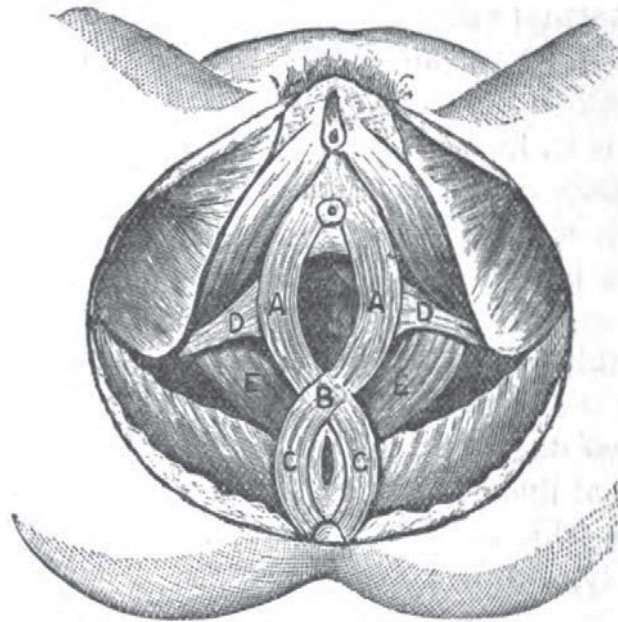


FIG. 1. (FROM QUAIN, NINTH EDITION.)

- A*, sphincter vaginae with muscular decussation, with muscle of opposite side at *B*.
C, sphincter ani, related to sphincter vaginae by a figure-of-8 arrangement.
D, transversus-perinei muscle, whose inner end or insertion is said to be too far forward in this figure, according to the text in Quain.
E, levator-ani muscle.

If this central point were thus strengthened by a crossing of fibers from each side of the vagina, a laceration here would require the transverse rupture of nearly twice as many fibers as a lateral laceration farther forward, where, indeed, the pressure of the occiput, as shown clinically by Matthews Duncan,¹ would be most likely to cause the rupture, other things being equal. The firm submucous band felt during parturition at the ostium vaginae, as pointed out by Sir James Simpson, and usually called the constrictor cunni, constrictor vaginae, and sphincter vaginae, was supposed to be an elliptical muscular ring, whose fibers were continuous behind the

¹ *Op. cit.*

fossa navicularis. This arrangement of the muscles is taught in the ninth edition of Quain's "Anatomy,"¹ of 1882, and by nearly all preceding works on the subject.

D. Berry Hart shows such a view to have been greatly in error, for, first, the transversi muscles run markedly backward and meet each other at quite an acute angle in the perineal body; and, second, the sphincter vaginæ is not a sphincter at all, but simply the median portions of the two halves of the levator ani, as they spread apart to allow the exit of the

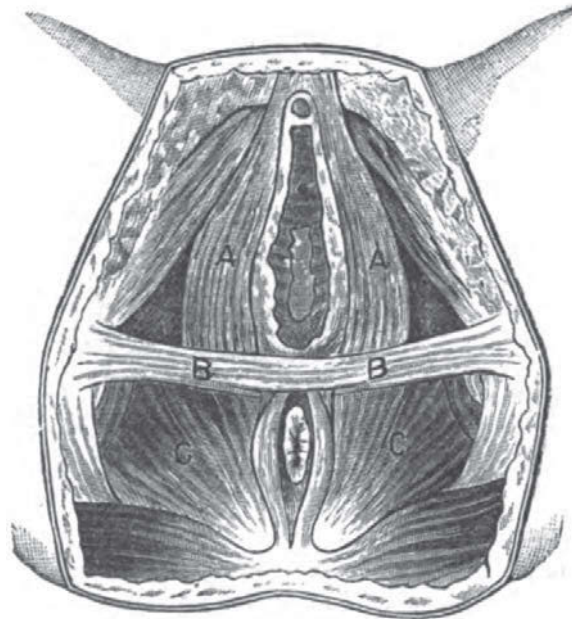


FIG. 2. (FROM SAVAGE.)

A, pubo-coccygeus muscle, constituting what is usually meant by the sphincter vaginæ, here shown, not even meeting, much less decussating, with its fellow of the opposite side.

B, transversus perinei, shown directly continuous with its fellow of the opposite side, at right angles to the conjugate axis of the perineum.

C, levator-ani muscle.

urethra and vagina, and these parts of the levator ani are called the pubo coccygeus by Savage.² This view of the muscular arrangement is sustained by Ranney,³ and illustrated in the last edition of Cazeaux⁴ and Tarnier. The fibers of the pubo-coccygei portions of the levator ani meet each other between the rectum and the coccyx, and between

¹ Quain's *Anatomy*, vol. I, ninth ed., p. 343.

² Hart's *Atlas*, p. 39.

³ *Loc. cit.*

⁴ *Loc. cit.*

the anus and the fourchette, but do not cross over as a true sphincter. Thus, it is evident that a median laceration is not required to tear any muscular fibers transversely, except a few of the transversi, until it reaches the sphincter ani, and in such an injury the skin and fasciæ only are torn, while the muscular fibers are spread apart longitudinally.

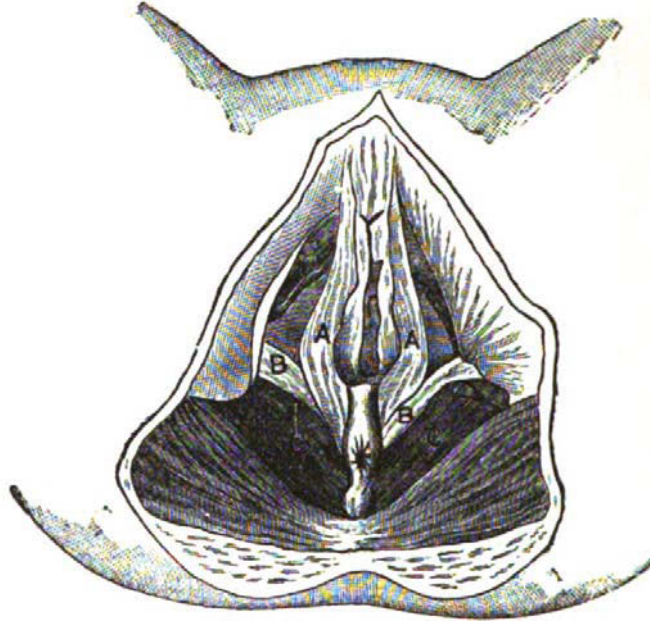


FIG. 8. (FROM HART'S *Atlas*.)

- A*, pubo-coccygeus portion of levator-ani muscle meeting the corresponding muscle of the opposite side, between the fourchette and anus.
- B*, transversus-perinei muscle meeting its fellow at an acute angle.
- C*, levator-ani muscle, the outer lateral continuation of the pubo-coccygeus.

Emmet,¹ in his paper before this Society, two years ago, aptly illustrated the muscular lesion in laceration when he compared it to the drawing aside of curtains, and the anatomical relations of the muscles amply bear out the illustration.

The distending force of the globular head in parturition tends to spread apart these muscular curtains, stretched from the pubes to the coccyx, and would doubtless do so in every case were it not for the obstacle to this spreading force afforded by the overlying integument and the underlying fascia.

¹ *Trans. Am. Gyn. Soc.*, 1883.

Let us suppose two vertical curtains, whose edges are in contact below and slightly separated above, then any attempt to increase the separation at the point of opening, by attempting to push a large body between them, will manifestly tend to drive them apart below. Now, if these be stayed at the point where they are united below, by other curtains before and behind, against the upper edge of which the propelling force is partly directed, we have greatly decreased the tendency to separation.

Suppose, now, we apply still another transverse curtain over these two, and, in addition, make such direction of traction upon it as will incline these vertical curtains toward each other, we have surely diminished the probability of their separation. In this method of support, the towel properly applied and the traction skillfully directed play the part of the third curtain in the illustration, and answer the purpose of a supplemental perineum in practice.

The flexion of the limbs lessens the violence of expulsive pains by relaxing the abdominal muscles. This position assumed puts the femoral extensors on the stretch, and thus lends assistance by dragging on the perineum, as pointed out by Dr. Chadwick,¹ in the discussion of Dr. Parvin's paper before this Society, three years ago, thus aiding that natural process which pushes the fourchette downward and forward in the course of its attenuation. This downward and forward movement of the posterior commissure is alluded to by Goodell (as quoted elsewhere) as an approximation of the fourchette to a level of the symphysis.

The same precession of the fourchette is well shown in the diagram (Fig. 63 of Barnes's "System of Obstetric Medicine and Surgery").²

By keeping the limbs close together in this position, nature is allowed to supply tissue from the neighboring soft parts, as recommended by Seibold,³ and more recently advocated, with characteristic discrimination, by Landis.⁴

¹ *Trans. Am. Gyn. Soc.*, 1882.

² *Op. cit.*, p. 154.

³ D. H. Agnew, *Lacerations of Perineum*.

⁴ *N. Y. Med. Rec.*, vol. xix, p. 253.

Again, when the head is bulging the perineum to its greatest extent, when the perineum is almost translucent, there are no lateral sulci, and no groove between the fourchette and the coccyx, so that the whole perineum is convex, even hemispherical, the curve extending from one gluteal

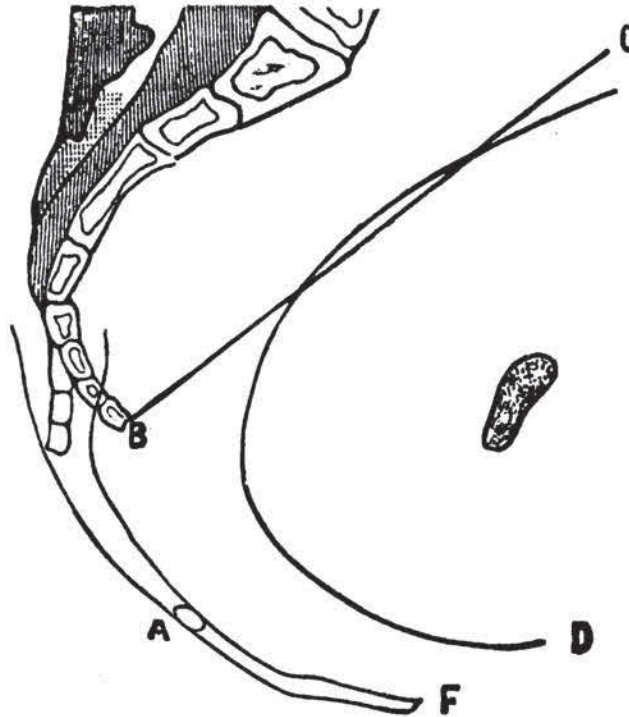


FIG. 4. (FROM BARNES.)

Here the distance from *A* to *F*, the anus to the fourchette, is greater than the distance from *B* to *A*, the coccyx to the anus, while normally the latter is only about half the former, thus showing the elongation of the perineum. This elongation and the bending backward of the coccyx contribute to the hemispherical shape of the perineum noticed in parturition.

eminence to the other, and from the fourchette to the coccyx; and the towel or bandage is in contact with every part, and affords equal elastic and resilient support throughout. It retards the head, at the will of the accoucheur, by varying the amount and direction of traction on the towel.

Sawyer¹ has well shown that, since the pubo-frontal is less than the pubo-mental diameter, the head should pass the vulva with the pubo-frontal diameter presenting, which condition is only secured by maintaining flexion.

¹ *Loc. cit.*

By the method under consideration, if the traction be made on the anterior zone of the towel, the sinciput is held back and flexion is retained. This plan exerts complete control of the direction of the head, and does not interfere with the use of the forceps, or the employment of episiotomy.

Garrigues¹ has called attention to the fact that, in order to get the greatest diameter of the vulvar outlet, it should be as nearly as possible at right angles to the axis of exit of the parturient canal. This relation is more nearly attained when the posterior commissure is on a lower level with respect to the woman's vertical axis than the pubic arch, and at the same time advanced toward the vertical plane of the pubes; and this method tends to this condition by making the direction of traction upward and forward. This substantially secures the same end that is reached in hooking the perineum downward and forward, by Goodell's method, thus making the fourchette "to approximate the level of the symphysis," as he expresses it, while danger of injury to the rectum, occasioned by the presence of the fingers, is avoided, which is a consideration of no little moment. Since the support is so equally distributed, there is not that perilous excitation of expulsive efforts through reflex stimulation, as pointed out by Tyler Smith, that is caused by the localized, partial, and unequal pressure made by the bare hand. The patient need not be exposed more than in any other method, for the limbs and abdomen may be covered with a sheet, and the perineum, in cases where it is in peril, should always be under the eye of the accoucheur, whatever method of protection may be employed. The support affords comfort to the woman, and it is unusual for objection to be made to the position.

Since, as is well known, injury to the perineum is quite as often inflicted by the shoulder as by the head, the support should be continued until the shoulder has escaped the vulvar opening. However, if the perineum has escaped rupture in any case, after birth of the head, distention is now generally so complete as to allow delivery of the shoulder without in-

¹ *Am. Jour. Obst.*, 1880, p. 241.

jury to these parts, provided they be guarded by the accoucheur placing a finger of the same hand on either side of the shoulder, and thus protecting the perineum.

It may be further stated that the method proposed in this paper can be employed with the greatest facility in cases where it may be proper to aid delivery by the forceps. I have repeatedly aided in holding the supporting towel with my left hand, at the same time with the right grasping the forceps for traction, direction, or retardation of the head, as may be indicated.

Finally, my clinical experience with the method here advocated warrants me in confidently commending it. But, to succeed with it, requires a thorough comprehension of the principles upon which it acts, and most faithful painstaking in every detail of its execution.

As already stated, no method will be successful in all cases.

Should rupture occur, the *immediate* operation for repair should be resorted to. Every man who assumes the office of accoucheur should be prepared for the immediate operation, and thoroughly competent to perform it.

The strong reasons in its favor can not be too frequently stated.

1. When done at once, the pain inflicted is very trifling.
2. If well done, complete union will generally be secured.
3. The dangers of hemorrhage, sepsis, and other serious evils will be averted, or at least much lessened.
4. The remote evil consequences of the injury to the patient, including surgical repair, will be avoided.

These opinions are expressed, not in a spirit of dogmatism, but with no less reserve because of an article, which has recently had wide circulation, from the pen of a surgeon and author of deservedly high reputation, in which article views directly opposed are expressed.

The fallacy and danger of delay in the work of repair can not be too clearly pointed out, nor too positively condemned.

DISCUSSION.

DR. T. A. EMMET, of New York.—I have nothing to say with regard to the support the doctor speaks of, but I wish briefly to describe my views with reference to the operation, and as to the portion of tissue which I think is injured when we have the condition called rupture of the perineum. In general terms, I hold that the perineal body is not ruptured without the sphincter ani is. But, in the first place, we should define what the perineum is. If we limit it to the muscular structure in front of the curve of the rectum, I would say that is true, and that when it is torn this muscular structure is torn. Unfortunately, however, we have been taught that the perineal body means a mass of fat in front which has nothing to do with the perineum. It is the muscular structure in front of the curve of the rectum which we should call the perineum. Now, the idea which I have is this: As the head comes down under the pubes and places the perineum upon the stretch, the common injury is a transverse tear at the insertion of the vagina into the muscular barrier at the outlet, which is pushed ahead as the rectal surface is forced backward, and the tear is directly behind or within the entrance to the vagina; in other words, if I put my finger through the entrance into the vagina, and with a cutting instrument should loosen the tissues in the same direction from the rectal wall, I should cause a rectocele as soon as the connective tissue of the pelvis retracted. We have the fascia here coming down from the superior strait along both sides of the vagina, forming the sulci, and through the traction of the connective tissue of the pelvis attached to it the two sides of the vagina are kept in close contact in the same manner as lateral traction upon an elastic tube would bring the sides in contact. This fascia which thus comes from the superior strait alongside of the vagina is reflected upon the front and back of all the muscles at the vaginal outlet; and as soon as a tear takes place, so that the fascia is separated where it is reflected from the side of the vagina, a portion of the posterior wall of the canal will have been separated from the muscular barrier like a partial pulling of a stove-pipe out of the opening in the wall, and the connective tissue of the pelvis

will retract the fascia, so that these muscles, being no longer supported, are drawn aside or backward, so that the injury, which is apparently extensive, is simply a dropping away or a rolling out of the tissues.

That the perineum gives no support to the pelvic organs is proved by one simple fact. When the sphincter ani is torn through, there is a condition in which the entire extent of the perineum is torn; and yet who ever found a woman suffering from a want of support in consequence of this injury? The perineum gives support simply to the rectal wall, in keeping its curve from encroaching upon the vagina, and, as soon as this support is lost, we have a rectocele formed. As soon as the connection of the fascia on the side is separated, it is retracted by the connective tissue of the pelvis, and the posterior wall is thrown into a rectocele for want of its support. Then the woman suffers from inconvenience in walking about; not from want of perineal support to the uterus, but from a lack of support to the blood-vessels, which become overdilated with blood and produce the suffering complained of. It is only as a secondary result from this accumulation of blood that the uterus in time becomes retroverted and prolapsed.

It is impossible by a diagram to describe the appearance which this injury presents; but, if any one will take the pains to examine, he will find just at the entrance to the vagina a transverse scar which shows where the tissues have become separated. Now, the operation consists in sewing together the separated parts, as shown by the scar, of the posterior wall of the vagina, or rectocele, to the inner face of the vaginal outlet, and this line of union takes the form of a crescent, with each horn running into the sulcus on the side. (Demonstrated upon the blackboard.)

As to the subject proper of the paper, I will leave that to the other members, as I have nothing to do with it.

I would like to ask for the experience of some of the members in the performance of this operation.

DR. W. H. BAKER, of Boston.—I have performed Dr. Emmet's operation repeatedly since he was kind enough to demonstrate it to me in the Woman's Hospital, and have been able, in nearly every instance since that time, to find such a scar as

he has spoken of just behind the sphincter muscle on the wall of the recto-vaginal septum, upon one or the other side, extending upon the lateral surface of the vagina. In many instances of rupture the injury has been done to one side exclusively, and in such cases my operation has been limited to that side with very satisfactory results. I regard the operation as a very great improvement on the old perineal operation. So far as demonstrating where the tear occurs, it seems to show that very decidedly.

DR. H. P. C. WILSON, of Baltimore.—I had hoped that Dr. Reamy's remarks would have called out some of the Fellows who have studied the subject more thoroughly than I have ; but it struck me that Dr. Reamy's paper was a most practical one. It was a paper which impressed me very forcibly. Certainly his mode of supporting the perineum is a rational one. It has one great advantage, and that is, it sets the physician free to watch the case as it progresses, and to manipulate without embarrassment. I hope the paper will be discussed, and I feel disposed to put the plan in operation. There seems to be no fixed plan for supporting the perineum ; we all agree that there should be some support given to this part during labor.

DR. M. D. MANN, of Buffalo.—With regard to Dr. Emmet's operation, I must confess that when I heard his paper I was at a loss to understand his method ; but I received an exposition of it at the Woman's Hospital in New York, and went home and performed the operation at once, and have done it since a number of times with great satisfaction. Although there are a good many cases of this kind, there are injuries which take place in a way different from that which he has described, and, therefore, it will not do to apply it in every case. In some cases there is no tendency to rectocele, but a direct tear of that portion of the structure which exists in front of the rectum down to the sphincter ani. In these cases Dr. Emmet's operation can not be performed, as there is no stretching of the parts above to permit us to make the crescentic incision. The older operation must be performed here, taking in only the mucous membrane, and not the skin ; simply restoring the tissues which have been torn, and not sewing the edges of the vulva together, as was done for so many years.

It seems to me that the plan of supporting the perineum described by Dr. Reamy is a very good one in a certain proportion of cases, but I am sure I have seen cases where it would be entirely impracticable. The worst cases of rupture of the perineum which I have seen have occurred in women who, at the moment of expulsion of the head, threw themselves across the bed, tore themselves away from the accoucheur, and the head was delivered unsupported. Of course, in these cases the application of this method would be entirely impracticable, although that could be obviated, perhaps, by the use of chloroform. These are the only cases in which I have seen bad rupture of the perineum. Where I have had the opportunity of delivering the head in my own time I have not seen bad ruptures occur.

Another objection might be urged to the method, and that is, it requires so many assistants. Sometimes we can not get two assistants. These points occur to me, and I simply mention them, although I do not know that they are of any special significance.

DR. JOSEPH TABER JOHNSON, of Washington.—With reference to this particular method of supporting the perineum I have had no experience. I will simply refer to one point in connection with the general subject, and that is with regard to supporting the perineum at all. It will be remembered that Dr. Reamy described the various methods of support recommended by numerous authors. The great number which he gave was quite striking, and nearly every form of support referred to differed from that recommended by others, and from the form which he recommended; yet, he says, there is no form of support which is perfect, and that rupture will occur occasionally. Some time ago I studied this subject somewhat, and ascertained, as far as possible, what the results had been among those who had had extensive experience in midwifery practice, and from that investigation it became apparent that more ruptures occurred in the practice of those who supported the perineum than in the practice of midwives who did not support the perineum at all. I believe that it occurs in the practice of all physicians and with all methods of support. The method recommended by Ramsbotham and others, who advise the physician to sit patiently, with the hand pressing against the

perineum for a long time, I think is harmful. I believe that the heat of the perineum produced by this long continued manual pressure, sometimes causes, by reflex action, greater force to the pains than would occur if no support was rendered. Besides, I found, in the course of my study of the subject, that negroes do not practice supporting the perineum, and that rupture among them is rare. Whether these different forms of support do not have something to do with irritating the perineum, and cause the expulsive efforts to be more violent and paroxysmal than would occur without any support, is a point which I suggest for discussion by Dr. Reamy in his closing remarks.

There is another point in the paper which I wish to commend, and that is the treatment in cases where rupture has taken place—namely, the sewing up of the laceration at once. Instead of being reticent concerning the accident, as a great many practitioners are, especially the young men, I believe that we should examine all cases, and, if a laceration be found, we should sew it up at once, bringing the parts into such close apposition as to secure immediate union, and thus prevent both sepsis and a secondary operation.

DR. J. P. REYNOLDS, of Boston.—I have listened with pleasure to the remarks which have been made in the course of the discussion, and I am anxious to offer one or two suggestions. I can not see how the report of women that they never had any support of the perineum, and that the perineum has never been ruptured, is of any value. Who has examined the perineum to determine whether a rupture has occurred or not? I have not for many years given any support to the perineum except that which causes delay of the advancing head, and I have not been able to see that any better results have been obtained from any form of support which has been practiced. I am sure, however, that we all meet with constant disappointments, and in those cases of bad rupture spoken of by Dr. Mann I have been obliged to satisfy my gynecological friends by putting in from one to three sutures. One gentleman speaks with reference to unmanageable patients in the last stage of labor, but I venture to say that, with the knowledge we now have of anesthetics in labor, those cases should never

occur, and that we should always administer an anesthetic to the extent of keeping any given woman under control. But I would say that in cases where such an injury is anticipated, and where, under circumstances beyond the control of the physician, an anesthetic can not be administered, the woman should be held firmly down to prevent the occurrence of the accident. With regard to moderate ruptures, I have noticed that one German writer says that two out of three can be prevented by posture of the woman, placing her in the dorsal or lateral position, and with the shoulders supported upon the foot-board of the bed in the semi-kneeling position, and that in this case two out of three escape rupture without support of the perineum.

A point has been brought to my mind, by an interesting series of inquiries addressed to me by a physician of Chicago, as to the result of slow, delayed, moderately severe labors, and labors terminating rapidly, in producing this accident. I think the paper to which I refer urges the possibility of preventing rupture of the bag of waters until the head has passed the vulvar opening.

DR. MANN, of Buffalo.—Dr. Reynolds speaks of the necessity of giving chloroform to do away with the danger of rupturing the perineum. I mentioned, I think, that I had seen cases of rupture where they gave the history of a restless patient and a violent effort, forcing the head through instead of over the perineum. I follow the method adopted by Dr. Chadwick, and in all cases of primipara, or where the perineum is rigid, and I anticipate or fear rupture, I always practice it, and in those cases it is not necessary to give chloroform.

DR. REYNOLDS.—I do not mean to say that I should be willing for any person to suppose that I administer anesthetics for the purpose of saving the perineum.

DR. JAMES R. CHADWICK, of Boston.—I believe I took the ground some years ago that the term *supporting* the perineum is a misnomer; there is no such thing as supporting the perineum. The various methods described are operative in preventing rupture of the perineum only in so far as they retard the advance of the head. I can not see how placing the hand, or a towel, or anything else, so as to stretch it, over the peri-

neum, is going to prevent the tissues from lacerating which lie between it and the head. I do not think that anything outside will prevent the perineum from being stretched to the extent of permitting the head to escape. But, in doing what is called supporting the perineum, men do retard the head, and give the tissues a chance to stretch and avoid tearing. Believing that that is the real end to be accomplished, my entire aim in conducting the last stage of labor is to insure slow exit of the head, and I never allow it to emerge during a pain. With the woman lying upon her side, and with my arm around the upper thigh so that I can lock my fingers of that hand with those of the other over the perineum, I prevent the head from escaping; that is, all I aim to do is to hold back the head during a pain. Sometimes I push the head back a little, sometimes forward a little, sometimes draw the perineum back a little, etc., until the tissues are all stretched so that the head can pass without rupture.

DR. ELLWOOD WILSON, of Philadelphia.—I have employed all the methods of supporting the perineum to me known, but there is one class of cases to which I might direct attention, and that is where the submucous tissues are separated to the extent of an inch, or an inch and a half, extending up the vagina before the mucous membrane of the vagina is disturbed at all, and before the head has distended the perineum sufficiently to produce a laceration. In those cases it is utterly impossible to prevent laceration. When this submucous tissue gives way a rent must necessarily occur, and it may extend through the entire perineal body to the outlet. The rent takes place centrally, or nearly so, rarely involving the sphincter ani; but the tear or rent running to the right or left side, following the course of this muscle. In such cases it is impossible to support the perineum so as to prevent the tear. We can perhaps prevent the woman from bearing down by the administration of ether or chloroform, and in this manner save a portion of the tissues. I have not tried Dr. Reamy's method, but I can not see that it is better than other modes, although it is not fair to criticise it without having had experience. My own method is to urge the woman not to bear down during the last expulsive pains, asking her to open her mouth and pant.

DR. THAD. A. REAMY.—I hope that I may have time to

briefly reply to such points in the remarks made by gentlemen as may seem most important. May I be pardoned for referring to them in the order that they occur to my mind, without following the order in which they were made? It is a matter of some surprise to me that my friend Dr. Chadwick should so strongly criticise, or object to, the word support. No gentleman present knows better than he how idiomatic our language is. He avers that the term *support*, in connection with the management of the perineum, is a misnomer. Support means succor, preservation. In the paper I used the terms support, preservation, and protection, synonymously. I do not care to play upon words. It is entirely immaterial whether we preserve the perineum by retarding the too rapidly advancing head, or relieve the perineum from pressure by delivering the head which has remained too long upon it, or by securing delivery of the head by bringing its least diameter in agreement with the diameter of the outlet, or by applying a supplemental support which receives the force of the pressure; if the management results in preservation, prevents rupture, it is support, succor.

My friend Dr. Mann objects to the method proposed because so many assistants are required, and that, in his experience, the cases where the worst lacerations have occurred have been where the woman suddenly jumps away from the accoucheur. In reply, I beg to say that two persons besides the accoucheur are quite sufficient; indeed, I have frequently employed the method successfully, even in instrumental deliveries, by the aid of a single woman, who held one end of the towel, I holding the other with my left hand, with the right making traction with the forceps. The method does not require skilled assistants. The number of persons needed are usually at hand.

It is my custom, at the critical moment, even when I have two assistants holding the towel, to take hold of its upper border at one end, with my left hand, giving an upward direction to the traction, thus not only increasing the support, but assuring proper direction to the head. The chief difficulty encountered is in having the assistants make traction, at the critical moment, with sufficient force.

As to the objection urged, that the woman will get away from the support at the moment when it is most needed, I may remark : if the bed is narrow, which is preferable, the patient being placed crosswise of the bed, the buttocks at its verge, the assistants on the opposite side of the bed from the accoucheur, the towel long enough to be placed over the perineum, around the buttocks, and each end of it held by an assistant, it is impossible for the patient to spring away from the support.

Objection is made that this method is uncomfortable to the parturient and inconvenient to the accoucheur. By no means. Certainly the position is more comfortable and less disagreeable, both to patient and physician, than the position so strongly advocated by two of the gentlemen who have spoken—viz., the patient on her side, the accoucheur sitting with his face toward her feet, one arm over her hip down over the groin, around her thigh, by which means she is held securely in place, while the other hand of the accoucheur is left free for perineal support, directing and receiving the head of the child, etc. To my mind this plan presents more discomfort and less efficiency. Moreover, by this latter method not only is unequal and inefficient support furnished to the perineum, but premature extension of the head is liable to occur, whereby the lesser diameter is not brought in relation with the axis of the outlet. By the method advocated in my paper these evils are avoided. It is one of the strongest points in its favor. By having the towel properly applied, it covers the bulged structures from the level of the coccyx to the fourchette, from one gluteal eminence to the other ; so completely is the whole field covered, so general, varied, and complete may be the pressure by the towel, that the head may be retarded at will, so as to prevent the child from being born at all until, in the opinion of the accoucheur, it is best. It is surprising with what ease pressure can be made in any desired direction by changing the direction of traction on the ends or borders of the towel.

But retarding the head is not the only measure which may be conservative to the perineum, although this is the bearing of the remarks of each gentleman who has spoken.

There are cases where the perineum is imperiled from pro-

longed distention. Every one has witnessed such cases, where the circulation in the perineal structures has been so long arrested from pressure that the tissues are fragile, necrotic. Under such circumstances speedy delivery is indicated ; not delay. Nothing is gained in these cases by the fingers in the rectum, nor can the perineum be further stretched or hooked back during absence of pain ; nor can any efficient support be given to it by the hand, as advocated. By the towel support, however, properly given, the patient anesthetized thoroughly, delivery being consummated by forceps, the perineum can frequently be saved, even in such extreme cases of peril.

No method of treatment will save all cases. There is general agreement that a narrow, straight pelvis, or an extreme sacral curve, or a very small vulvar orifice, or a precipitate labor, or, in certain cases, a protracted labor, after the head is on the perineum, or an unusually large head, one or all of these conditions may seriously endanger the perineum. But my paper does not discuss these issues ; it simply describes a method of support which in no way interferes with the general or special management of the labor. Be it understood that it is my custom to deliver with the patient well under an anesthetic—a rule demanding more rigid enforcement should the perineum be in special danger.

I must express surprise at the statements of my distinguished friend, Dr. Emmet. He maintains that, if rupture occurs in any other way than simply as a separation of the vagina from the pelvic fascia, it is wholly immaterial. He confesses that laceration of the external integument may to a slight degree occur, but that its consequences are of no moment; and we may justly infer that its prevention is useless trouble. Let me hastily call attention to a clinical picture. A woman has been delivered of her first child, and on examination there is found a central slit extending from the fourchette half way to the anus, or complete to the anus. The woman is placed upon her back, the limbs being separated, the finger of the examiner is inserted into the rectum, the blood is sponged away from the vagina, the field of injury is now perfectly in view, when it is found that the tear, which had already been detected in the external structures, extends upward for an inch, or an

inch and a half, separating the pubo-coccygeal muscles, also the transverse perinei muscles. In short, dividing all perineal and vaginal structures down to the rectum, but not involving it.

Is there a gentleman of large obstetric experience who has not seen this picture? Is this a simple separation of the vagina from the pelvic fascia?

If this injury is left until spontaneous repair is ended, will nothing be seen to mark the damage but the transverse scar described by the gentleman?

If this injury is not repaired the woman is ruined. The repair should be done at once. And the method of repair should consider the direction and extent of the injury. And I submit that the new operation of Dr. Emmet, so ingenious and eminently proper in suitable cases, is not only not available as an immediate procedure in the case just described, but will be equally unavailable as a secondary operation. The injury which Dr. Emmet describes depends on the fact that the external orifice did not properly dilate, and the ring was carried in front of the head, and thus the vagina separated from the fascia. This form of accident, however, does not constitute, of all cases of perineal injury, more than twenty or twenty-five per cent.

In conclusion, may I be permitted again to state that the method of support recommended in my paper is only to be employed in cases where the perineum is in extreme peril. I have very rarely employed it in multiparæ.