THE USE OF THE HAND TO CORRECT UNFAVORABLE PRESENTATIONS AND POSITIONS OF THE HEAD DURING LABOR.

By JOHN S. PARRY, M.D., Attending Accoucheur to the Philadelphia Hospital, Vice-President of the Obstetrical Society of Philadelphia, etc., etc.

(Read before the Obstetrical Society of Philadelphia, Nov. 6th, 1873.)

It is only after much thought and a series of observations, which have extended over a number of years, that it has been deemed proper to direct attention to the method of changing unfavorable presentations and positions of the child's head which is about to be described. The recommendation will be sharply criticised by some and emphatically condemned by others, but it is made, after no inconsiderable observation, with the earnest hope of diminishing the suffering of woman in the discharge of her highest function, as well as to preserve the lives of her children. The responsiblity of making the suggestion is fully realized, and at the very outset it is desirable to distinctly reassert the truth of the trite maxim, that "Meddlesome Midwifery is bad." The faithful student soon perceives how wonderful Nature is in her resources, how marvellously she adapts means to ends in emergencies, and he becomes convinced that, though labor is likely to be more painful, more tedious, and consequently more dangerous in the class of cases alluded to, the child will usually be born without assistance. As will be stated more fully in the sequel, it is not intended to recommend indiscriminate interference in unfavorable cephalic presentations and positions, but to suggest a method of rapidly terminating labor in certain cases in which Nature *is unable* to complete her work.

The hand may be employed to facilitate delivery in a series of widely different conditions, but the following are those to which attention will be directed in this paper:

1. To flex the head when partially extended in all its presentations.

2. To transform occipito-posterior into occipito-anterior positions.

3. To change presentations of the face with the chin behind, into those of the vertex with the occiput in front.

Of the first class of cases nothing will be said at present. In regard to those of the third no excuse need be offered for any reasonable attempt to mitigate their severity or to remove their dangers, which all accoucheurs recognize and deeply deplore. In relation to the posterior positions of the occiput it is not improper to make a few preliminary remarks.

It cannot be denied, as was shown by Naegelè, that in the large majority of these cases the head will rotate, and labor be terminated by the spontaneous change into right or left occipito-anterior positions of the vertex. It cannot, however, be admitted with the same high authority that in these cases labor terminates as quickly, with as little suffering, and as favorably both for mother and child, as if the occiput was originally directed to the anterior portion of the pelvis. The experience of most accoucheurs will confirm the opinion of Hodge, America's most eminent obstetrical authority, that, in consequence of the distance which the head has to traverse, labor is more painful, tedious and dangerous.

In consequence of these facts, most authorities in obstetrics insist upon the necessity of carefully watching the progress of the labor in occipito-posterior positions, and of facilitating rotation if it does not occur spontaneously. This is to be effected by pressure made either by the fingers applied to the temple of the child, or the vectis over the occiput, while Simpson and his followers direct the accoucheur to turn the head of the child with the forceps when it has descended to the floor of the pelvis. The latter proposition need not be discussed here. The former methods are entirely practicable in most instances, and at the bedside it will rarely be found that any other manipulations than those with the finger or vectis are necessary; but it is unfortunately the occasional lot of the obstetric physician to fail in his attempts to produce anterior rotation by any of the means which are usually advocated by authorities upon this subject. Under these circumstances the forceps might be applied and an

attempt made to drag the child into the world in its unfavorable position, or, failing in this, version might be resorted to, an operation which in cases of delay is very difficult to perform, and is dangerous alike to mother and child. Besides these, the only other resort is craniotomy, the most terrible of all operations in obstetric surgery. It is to add another to the obstetric physician's resources, and to enable him to avoid this terrible alternative that this paper has been prepared.

In the ordinary manipulation to rotate the occiput in front in posterior positions, the operator is told to change the position slowly in order to avoid injury to the child by twisting its neck too suddenly. That accidents have arisen from this cause, and the child's life been sacrificed in consequence, is probably true, but it seems not unlikely that the shoulders rotate in the cavity of the uterus more frequently than is usually supposed, and that the child will bear, without injury, more manipulation than is generally believed. As this point is not fairly established, and as change of the occiput from an unfavorable to a favorable position may involve rotation of the head over a considerable portion of one side of the pelvis, it is to be distinctly understood that the manipulation, which will be described presently, is only to be resorted to in those rare cases in which nature is not equal to her work, and after the more common means have been fairly tried and have failed, when the only other alternatives are version under great difficulties, or if this proves unavailing, craniotomy.

The procedure is applicable to cases in which the head is arrested either at the brim or in the upper portion of the cavity of the pelvis. Before it is resorted to the accoucheur must be absolutely certain of his diagnosis. About this there must be no error, or otherwise he will convert a favorable into an unfavorable case. I have never allowed myself to employ the hand in the manner and for the purposes about to be described, until the diagnosis had been confirmed by a thorough examination with the whole hand introduced into the vagina. As this occasions pain, it is almost always necessary to make the examination with the patient under the influence of ether.

The operation may be performed with the patient upon her back or in the ordinary obstetric position on the left side. The former is far preferable in most instances, as it allows more

freedom of manipulation, and the back of the hand applies itself more perfectly to the hollow of the sacrum. The patient should be brought close to the foot of the bed, with her buttocks at the edge of the side, and her feet supported on two chairs or by assistants. The physician now takes his position at the foot of the bed and at the right side of the woman. Previous to proceeding with the manipulation the patient should be thoroughly etherized, since the best directed efforts may fail if she is not perfectly relaxed. This done, and the bowels and bladder having been emptied, the accoucheur is to pass his right hand, well oiled, into the cavity of the pelvis, the dorsal surface of the fingers being passed along the hollow of the sacrum over the posterior portion of the presenting part, and the thumb behind the pubis over its anterior portion. In the meantime the left hand has been applied to the fundus of the uterus to steady that organ. This accomplished, the next movement is to carry the head of the child, which lies in the palm of the hand in the vagina, well up above the brim of the pelvis. The following steps of the operation vary with the presentation and position. If it is simply a partially extended vertex, or a brow-presentation with the occiput in front, the head is simply flexed, after which the case may be left to nature, or the forceps applied, as may seem best.

If the case be one of a face-presentation, with the chin behind, the head is to be completely flexed, and the presentation and position changed to the most favorable of all others, an occipito-anterior of the vertex.

In occipito-posterior positions of the vertex more is needed than simple flexion. The head of the child is grasped in the hand with the fingers over the occiput and the thumb over the forehead or temple. Having lifted it above the brim and secured flexion, the left hand is to be removed from the fundus of the uterus where it has been employed in simply supporting the organ. It is now to be used to force rotation of the body of the child by external manipulation, the anterior shoulder being the point against which these efforts may be directed with the most effect. While the shoulder is being pushed to the opposite side of the cavity of the uterus, the hand in the vagina acts upon the child's head and rotates the occiput from a posterior into an anterior position, of course imitating nature in the

manœuvre, and changing a right posterior into the right anterior position, and a left posterior into the left anterior occipital position.

If the uterus will now contract strongly, the hand may be retained for a little time until the head is fixed in its new position, when the case may be left to nature. If pains have ceased the forceps are to be applied above the superior strait, before the hand is removed from the vagina. Inasmuch as this may be necessary this instrument should always be at hand before commencing the manipulation. For the same reason the patient is to be placed in a position in which the application of the forceps may be made at any time, and because the blades of the instrument have to be carried high up, it is necessary that the buttocks be placed close to the edge of the bed, so that the handles can be pushed well back on the perineum. For precisely the same reason the right hand only should be used to act upon the child's head, since the right or male blade of the forceps has to be introduced with the left hand.

The application of the forceps is not more difficult under these circumstances than in the ordinary high operation, except that the blades have to be passed up rather higher than when the head is driven down upon the brim by the uterine contractions. Some care has also to be taken to prevent the head leaving the new position during the introduction of the first blade, but more especially immediately after the removal of the right hand and during the preparations for the introduction of the second blade. The first blade having been put in position, the hand should not be removed too soon, not until the head has been carried to the opposite side of the pelvis, when the blade of the forceps fairly applied to the side of the child's head is to be used as a lever in the absence of the hand to fix the presenting part against the pelvic wall of the opposite side, in order to prevent the possibility of its returning to its original position. At this point in the operation an intelligent assistant, or at least one who can be trusted to execute all directions faithfully, is necessary to steady the blade while its fellow is being introduced. The left blade of the instrument is to be introduced as in ordinary cases, the accoucheur having always assured himself that the head has not changed its position previous to its introduction.

To illustrate the opinions which have been enunciated the following histories of cases are related. Others might be published, but these are sufficient to illustrate all the principles to which attention has been directed. The first, though a very difficult labor, is one of the simplest of the class of occipito-posterior positions. In this instance the combined manipulation was successfully resorted to without a previous trial of the vectis, which was not at hand. In the second, though anterior rotation was accomplished with the forceps after considerable difficulty, the woman could not be delivered until flexion and rotation had been secured by elevation of the head above the brim. In the third the manœuvre was successfully employed in a case in which the face presented with the chin behind, and in which my conviction is, that it saved the life of the child. In the fourth it was an important aid to delivery in a difficult case of craniotomy.

CASE I.—*Right occipito-posterior position. Rotation of the occiput with the hand. Delivery with the forceps applied above the brim.*

Mrs. Dr. W., æt. twenty-six, primipara, was seen in consultation with Dr. Harrison Allen, at 11 o'clock A.M., on June 14, 1872. She had at that time been in labor for nearly twenty-four hours and the first stage had terminated two hours and a half before I reached her. During that time there had been no advance of the head, though she had strong pains. Although a vigorous woman, she was much exhausted, with a furred tongue, rapid pulse, hot skin, and hot, dry vagina.

There was a large caput succedaneum which, with the violent bearing down efforts produced by the examination, prevented the recognition of any suture or fontanelle, but the position was supposed to be the left occipito-anterior. The head was arrested and seemed to be fixed at the superior strait.

Wallace's forceps were applied at the superior strait, and though strong traction was made, the head could not be made to descend in the least, while the patient complained of severe pain in the abdomen and back in the region of the promontory of the sacrum. She said that it felt as if something was fast inside of her and was being dragged away. It was painfully evident that the obstruction could not be overcome by any justifiable traction, as the forceps were applied; and it appeared

probable that there had been an error in the diagnosis of the position. Re-examination did not enable us to correct this, owing to the presence of the large caput and the violent expulsive efforts produced by the manipulation.

She was now thoroughly etherized, and a right occipito-posterior position diagnosticated, after which I passed the right hand into the vagina, and placing the fingers over the occiput and the thumb over the brow, with considerable effort raised the head above the brim of the pelvis and made forcible flexion. Then placing the heel of the hand upon the exterior of the abdomen, below and to the right of the anterior shoulder of the child, I attempted to rotate the body in the uterus, while at the same time I easily rotated the head to the right occipito-anterior position. The male blade of the forceps was introduced without removing the hand, after which Dr. Allen supported the handle, and using it as a lever made mild pressure upon the side of the head. An examination proved that the position was unchanged, and the second blade was applied. The instrument (Wallace's) locked easily; the lock being in contact with the vulvar orifice. Strong traction was required before the head passed the pelvic brim. It descended rapidly through the cavity, but was delayed upon the perineum, owing to the extreme distention of this structure which was necessary before the head could be born. This occurred a little more than an hour after the application of the instrument. The body was born in a few minutes, restitution occurring as in cases of primary right occipito-anterior positions of the vertex.

The child, which was above average size, breathed feebly at first, but soon cried lustily. There was temporary paralysis of the portio-dura of one side from pressure of the forceps. The mother's recovery was uninterrupted and perfect.

CASE II.—*Left occipito-posterior position of the vertex. Rotation with straight forceps. Attempt to deliver with Hodge's forceps by rotating the occiput into the hollow of the sacrum. Anterior rotation of the head by manipulation. Delivery of a living child by Wallace's forceps. Recovery of the mother.*

E. B., æt. 20, single; born in Ireland, fell into labor at full term, in the Philadelphia Hospital, about noon, April 25, 1871,

under the care of Dr. A. W. McCoy, resident accoucheur. The duration of the first stage was eighteen hours and a half. The membranes ruptured at 6 A.M. on the 26th, and during the succeeding hour the vertex descended into the upper part of the cavity of the pelvis. At this point the progress was arrested, though the pains continued strong. I reached her at 10 A.M. She had a cool skin, clean tongue and strong pains. The vagina was cool. The head, a large one, was in the left occipito-posterior position, and the occiput was disposed to rotate into the hollow of the sacrum. There was a middle-sized caput succedaneum and the head, which was partly extended, had commenced its descent into the cavity of the pelvis. The anterior portion of the head was tightly wedged against the anterior parts of the pelvis, though there was more room behind. The labor had not advanced any for three hours, and the patient, though not exhausted, was beginning to show the effects of violent exertion, and begged that the labor be terminated with instruments. The forceps were therefore resorted to.

Straight forceps (Beatty's) were applied without great difficulty, and the head was rotated from the left occipito posterior into the anterior position of the same side. This was effected with some difficulty, and only after the exertion of more force than we thought good for the child. As soon as the force was removed, the head with the forceps would immediately return to the original occipito-posterior position. Strong traction was now made and continued for some time, but without producing any progress in the labor. The straight forceps were removed with great difficulty, an ear of the child being caught in the fenestrum of one of the blades.

An attempt was now made to secure perfect flexion, but was unavailing. Wallace's forceps were then easily applied with the head nearly in the first position of the vertex. Very powerful traction was continued for an hour, but without advancing the labor. The instrument was then removed, when the head returned spontaneously to its original position. Hodge's forceps were then tried, with the head in the left occipito-posterior position, and the delivery attempted by rotating the occiput into the hollow of the sacrum, but though violent efforts were made the head did not move in the slightest.

These manipulations occupied more than three hours, and

the waters had been evacuated for more than seven hours, yet the fœtal heart was still beating loudly. In consequence of the partial descent of the head in the cavity of the pelvis, and the rigid contraction of the uterus, version had been considered, but declined. No alternative seemed to be left but craniotomy, when she was brought thoroughly under the influence of ether, and the whole hand passed into the pelvis, with the fingers over the occiput and the thumb over the temple. With a strong effort I succeeded in carrying the head above the pelvic brim, after which flexion was easily perfected, and by combined manipulation the occiput was brought round into the first position of the vertex, and the body was turned in the cavity of the uterus. It is possible that version could have been performed at this time, but after a little thought I determined to repeat the attempt to deliver with the forceps. Wallace's instrument was easily introduced, and after strong traction the head was dragged through the superior strait and pelvis, and was born at two P.M. Much force was necessary to effect delivery of the shoulders and pelvis of the child. The child, which weighed nine pounds, cried feebly when born, but was soon resuscitated. There were superficial abrasions beneath each ear. The caput succedaneum was very large, and the head was much distorted from the prolonged pressure. There was some hemorrhage, and the patient had a violent attack of puerperal fever, which was epidemic in the hospital at the time, but finally recovered.

CASE III.—*Face-presentation. Chin behind and to the right side. Failure of attempts at flexion, rotation, and version. Application of Hodge's forceps, and failure to produce rotation or to deliver by traction. Introduction of hand; elevation and flexion of the head. Delivery of a living child with the forceps.*

Mrs. P., æt. about 30, was seen in her sixth confinement in consultation with Dr. Elliot Richardson, at 9½ A.M., on June 23d, 1871. She had reached full term, and labor had commenced some time during the previous day. The first stage terminated between 11 and 12 o'clock on the preceding night. When Dr. Richardson reached her the face was presenting

with the chin to the right sacro-iliac junction. The pains were strong, and continued so throughout the night.

When I saw her at 9.30 A.M. the next morning her condition was fair, but the position remained unchanged. Her pains were moderately strong, her mind was wandering, and she was fearful that her labor would terminate badly. The face had descended almost to the inferior strait, and the anterior lip of the uterus was compressed between the brow and the symphysis pubis. There was plenty of room posteriorly, but the forehead was tightly jammed against the left anterior portion of the pelvis. An attempt was made to transform the face-presentation into one of the vertex by pushing up the chin and bringing down the brow. This failed, although the whole hand was introduced into the vagina, because the chin caught against the brim of the pelvis behind, and the forehead would not descend in front. We likewise failed to rotate the chin in front, though the hands and vectis were both used. Three hours had now passed and the patient was both alarmed and exhausted. Version could not be performed, so Hodge's forceps were applied, and an attempt made to force rotation. Traction was continued for nearly an hour without effecting anything. Almost in despair, I passed the whole hand into the pelvis, placing the thumb over the brow and the fingers over the superior maxillary bone, and pushing forcibly upwards, the head was easily raised above the brim of the pelvis. It was then flexed without any difficulty, and a mento-posterior position of the face was converted into an occipito-anterior of the vertex. As the pains had almost ceased, Wallace's forceps were applied, and at 1 P.M., a few minutes later, the child was born. It was of average size, was almost still, but after a little effort was fully restored. The mother recovered without any unfavorable symptoms.

CASE IV.—*Right occipito-posterior position. Prolapse of the Cord. Pelvic deformity. Failure to deliver after violent efforts with the forceps. Craniotomy. Rotation with the hand, and delivery with the forceps.*

Mrs. O——, a primipara, aged about 20 years, was seen in consultation with Dr. James F. Wilson, at 4 P.M., July 10, 1873. Labor had commenced early on the previous day. The bag of

waters ruptured early on the morning of the 10th. In the afternoon the cord prolapsed opposite the sacro-iliac junction, and Dr. Wilson was unable to return it. The head was in the right occipito-posterior position and well flexed. The pelvis was narrow, the conjugate diameter scarcely exceeding three and a half inches. When seen at 4 P.M. the os was dilated, the large firmly ossified head at the superior strait, a large loop of cord prolapsed, the vagina was hot and rather dry, the skin moist and warm, pulse frequent, and patient anxious about the result. She was immediately placed upon her hands and knees, but though prolonged and careful efforts were made to reduce the cord, we failed. She was then allowed to lie upon her back, and seizing the cord it was carried upwards into the uterus, it having been decided to place it if possible out of danger, and then to go on and seize the feet, turn and deliver. The right hand was used in the manipulation, and when it was in contact with the thorax of the child, the whole of the cord being within the cavity of the uterus, a strong convulsive movement of the infant was felt, and immediately afterwards the funis was perfectly flaccid in my fingers. It was too evident that the child was dead, and it was determined at once to apply the forceps and attempt to deliver.

Simpson's instrument was used, but the utmost force which Dr. Wilson could exert did not move the head in the slightest. The effort was continued as long as was deemed safe, when, the child being dead, it was determined to perforate. This was done about 6 P.M. The brain was cleared out, but delivery could not be affected by powerful traction either with crotchet, cranio-clast, or forceps. The upper portions of both parietal and occipital bones were pulled away with Meigs' forceps and the cranio-clast, but without enabling us to drag the head through the superior strait. The front portion of the head overhung the pubic bone to such an extent that we could not tear it away with these instruments, and for the same reason it was impossible to bring the chin down and to convert it into a mento-anterior position of the face, so that the latter could be crushed with the cranio-clast. No cephalotribe was at hand.

It seemed almost as if we would fail to deliver, when, with Dr. Wilson's concurrence, I determined to resort to the manipulation which has been described. The head was carried above

the brim, flexed, and the occiput rotated in front, after which Wallace's forceps were applied, and a few minutes before midnight the child, which was a large one, was dragged into the world after severe traction.

The patient suffered from retention of urine, slight abdominal tenderness and pain for a few days, but recovered perfectly.

The success of an attempt to perform this manipulation depends in a great measure upon thorough etherization of the patient. When the woman is entirely relaxed by the anæsthetic, it is very surprising what can be done by forcibly pushing the head upwards. Not only does the child ascend, but if the lower portions of the uterus have been carried with the head into the cavity of the pelvis, it may be lifted with its contents above the pelvic brim, when the latter become movable and easily manipulated. Both in the pregnant and unimpregnated women the degree of stretching and movement of which the generative organs are capable when the patient is completely anæsthetized, appears very remarkable to one who has never employed this important agent in such cases. Not only may the womb be depressed, as has been done during amputation of the neck of the organ, but it may be pushed upwards and the vagina stretched till it is above the brim of the pelvis. This was fully illustrated in the case of face-presentation which has been related. The same thing in the unimpregnated woman was illustrated with equal force after the preceding remarks had been written. A patient with a tumor which was lodged, and apparently fixed in the cavity of the pelvis, was thoroughly etherized, and the left hand, as recommended by Prof. Simon, was introduced into the rectum to make an exploratory examination, when the tumor was raised out of the pelvis, after which it could be pushed almost anywhere in the lower part of the abdomen. Not only was this the case, but the womb was likewise pushed upwards by the hand in the rectum, until the fundus, which could previously be felt in the usual position just below the upper margin of the pubis, was now just below the umbilicus, and the os uteri could be felt above the brim through the thin abdominal walls. The os was thus lifted above the point previously occupied by the fundus.

One other point is worthy of mention in connection with this

use of the hand to produce anterior rotation in occipito-posterior position of the vertex. It is that in cases in which the body of the child cannot be rotated in the uterus by external manipulation, the head may be turned and the occiput brought in front without any great danger to the child. It is certainly less dangerous than Simpson's manipulation with the forceps, because, in the former, the hand, the most delicate and useful of all instruments, is the agent employed.

The study of the literature of obstetrics, so far as the writer has been able to complete it, has failed to reveal any account of the manipulation which has been described, yet a point to which attention has been directed can scarcely be deemed strictly original, since obstetricians have at various periods, from the time of old Cosmo Viardel, directed attention to the use of the hand in obstetrics. It is only the new combination of various manipulations which have been recommended at various periods to which attention is directed.

1513 ARCH ST., PHILADELPHIA, *Nov.* 1*st*, 1878.