FROM THE CHICAGO LYING-IN HOSPITAL

THE TREATMENT OF OCCIPUT POSTERIOR POSITION AFTER ENGAGEMENT OF THE HEAD

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IN a short article on technique it is not possible to cover the whole subject of the treatment of occiput posterior position, and therefore I have selected one phase of it, the most common one: what to do after the head has engaged in the pelvis but anterior rotation of the occiput has failed to take place, indeed, the occiput may have turned further backward after descent, and has come to rest in the hollow of the sacrum, with the small fontanel in the median line.

In order to lend a little scientific precision to our description of the various positions the presenting part occupies in the pelvis, I have recommended that we name these positions according to the degrees of a semicircle, the zero point being the pubis. Thus when the occiput lies, as just described, we would term it an occiput 180 degrees, right or left, depending on which side the occiput came down. Occiput right transverse would be O.D. 90 degrees; occiput left anterior, O.L. 45 degrees, etc.

As a rule in practice we find that a head which comes into the pelvis O.D. 135 degrees or O.L. 135 degrees (i.e., O.D.P. or O.L.P., respectively) will, if given time enough, rotate spontaneously the rest of the half circle and come to lie O.D. 5 degrees, or O.L. 5 degrees, or 0 degrees, whence it will be delivered spontaneously or by the aid of a simple forceps operation. Since this may require many hours of labor, the accoucheur should support the parturient's powers with food, especially sugars and fluids, and with rest and sleep. Morphine and scopolamine, morphine and magnesium sulphate, with or without oil-ether rectal instillation, are to be used generously. The bag of waters must be preserved as long as possible and ruptured only after complete dilatation of the cervix has been obtained. There are exceptions to this rule but they are rare. The patient should lie mainly on the side to which the occiput points but should change often. The rectum and bladder are to be kept empty.

Slow dilatation of the cervix may be due to primary inertia of the uterus, or to abnormal action of the uterine muscle, e.g., the formation of contraction rings and strictures. These must be differentiated. The treatment of course varies. In the one we will stimulate, in the other tranquilize the uterus. Early in the first stage a dose of castor oil with 3 to 5 grains of quinine may be given. The nasal application of pituitary extract according to Hofbauer's method may be tried, but the accoucheur must stand ready to remove the packing and give ether at once, when the pains get too strong and endanger the mother or child. I seldom employ this remedy. Narcotics are the best for strictura uteri; they may be aided by atropin in physiological dose.

In the olden time we obtained much benefit from the following procedure: the parturient was given a hot bath (now superseded by a hot wet pack), then a generous alcohol rub, then an enema of 30 grains of bromide of soda, and 15 grains of chloral; then a drink of hot lemonade; finally 1/6 to 1/4 grain of morphine; the room was darkened and quieted. A refreshing sleep lasting 6 to 10 hours usually resulted and dilatation, as the result of insensible labor, was often found nearly complete when the pains began again.

Should medical treatment fail, the dilatation of the os can be hastened by packing the cervix and vaginal vault with gauze saturated in glycerine to which ½ per cent mercurochrome has been added, or by metreurysis.

Let us say that the parturient has been carried to the point where the cervix is completely dilated, or to a diameter of 8 or 9 centimeters and by means of Duehrssen's incisions the opening can be safely enlarged to permit extraction of the child. Now what to do?

First one must be convinced from the character of the labor up to this point that the woman will not be able to end the process herself. It is well to be prepared for surprises, as occasionally the head

flexes, the pains strengthen, and rotation of the occiput to the front takes place rapidly. If the patient merely changes her position in bed, or gets up to go to the toilet, this favorable mechanism may be started.

Beyond question it is better for the mother and safer for the baby to have anterior rotation of the occiput take place and the birth occur with the usual anterior mechanism. This statement is made though I am well aware that a certain percentage of cases of occiput posterior terminate as such spontaneously with the small fontanel coming out over the perineum, and also that a certain number of accoucheurs do not believe in effecting anterior rotation before they attempt delivery. Only when our attempts to correct the abnormal position fail do we consent to deliver the occiput over (usually through) the perineum.

The methods of dealing with persistent occiput posterior positions are numerous: Hodge's maneuver consisting of upward pressure on the synciput during the pains; Tarnier's maneuver, the attempted rotation of the head with the fingers which obtain a purchase behind the ear; the same aided by backward pressure on the cephalic prominence above the pubis (the forehead); rotation of the head in the pelvis by combined manipulation under an anæsthetic, the whole hand being used internally; the pushing of the head up out of the pelvis and the rotation of the whole fetal body by twisting the child's trunk to the opposite oblique; podalic version; the use of the forceps as a rotator, or as combined rotator and deliverer.

In the majority of cases it is possible to turn the head in the pelvis by means of the hands, at least so far as to bring the small fontanel from the hollow of the sacrum, O. 180 degrees, into an anterior quadrant of the pelvis, O.L. 45 degrees, or O.D. 45 degrees. Then one can easily finish the rotation and the delivery with forceps.

With the patient under deep anæsthesia, the whole hand is inserted and the head is gently lifted up out of its imbedment in the soft parts. It makes little difference which hand is used inside the pelvis, though in O.L.P. I usually put the left hand in, behind the pubis and press backward on the forehead lying there, with the fingers, or, if it seems easier, I twist the wrist so as to insinuate the fingers underneath and behind the occiput lying on the left side, the thumb pressing on the side of the forehead. By the supinating of the hand the head is turned into the transverse. Now the fingers are quickly withdrawn part way, the hand reversed so as to bring its dorsum behind the pubis, the fingers resting on the malar bone

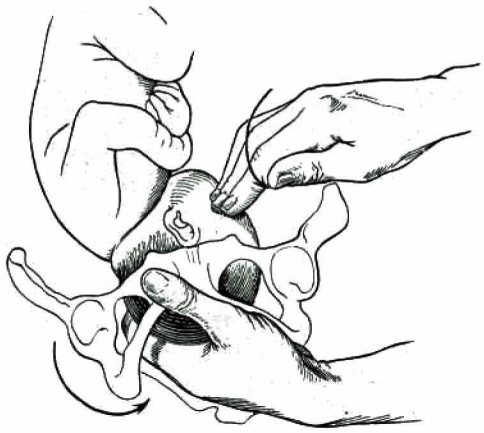

Fig. 1. Changing a right occiput to an anterior position by combined manipulation.

and by a supinating movement, pressure on the forehead is exerted sweeping this part of the head through the right half of the pelvis toward the sacrum. Thus the occiput comes to lie near the pubis. This maneuver succeeds best when the head is partly deflexed. When flexion is well established it may be (it is not always) better to work on the occiput directly.

In O.L.P. (O.L. 135 degrees) with flexion, the right hand is laid behind the head with the volar side of the fingers upward, and by a pronating twist of the wrist combined with flexion of the fingers the occiput is levered to the front. All the movements are aided, abetted, modified, and controlled by the outside hand and the turning of the head is made easier by lubricating it and the vagina with green soap (Fig. 1). It is also advisable to have the head of the patient 3 or 4 inches lower than the pelvis in order to prevent prolapse of the cord when the fetal head is raised up.

One is often disappointed to find that after the head has been turned into an anterior sector of the pelvic circle, before the forceps can be applied, indeed often before one withdraws the hand, the occiput slips back into its former malposition. There are several ways of handling such a situation: (1) have the assistant by a hand above the pubis press the forehead backward and hold it while you apply the forceps (not very successful); (2) have him try to turn the baby's back anteriorly, or indeed a little beyond the midline and press down on the fundus, to favor flexion, etc. (also not very successful); (3) the operator can, after turning the head as far as it will go, withdraw his hand and neatly slip in the other one behind the pubis to press the forehead back; (4) he may

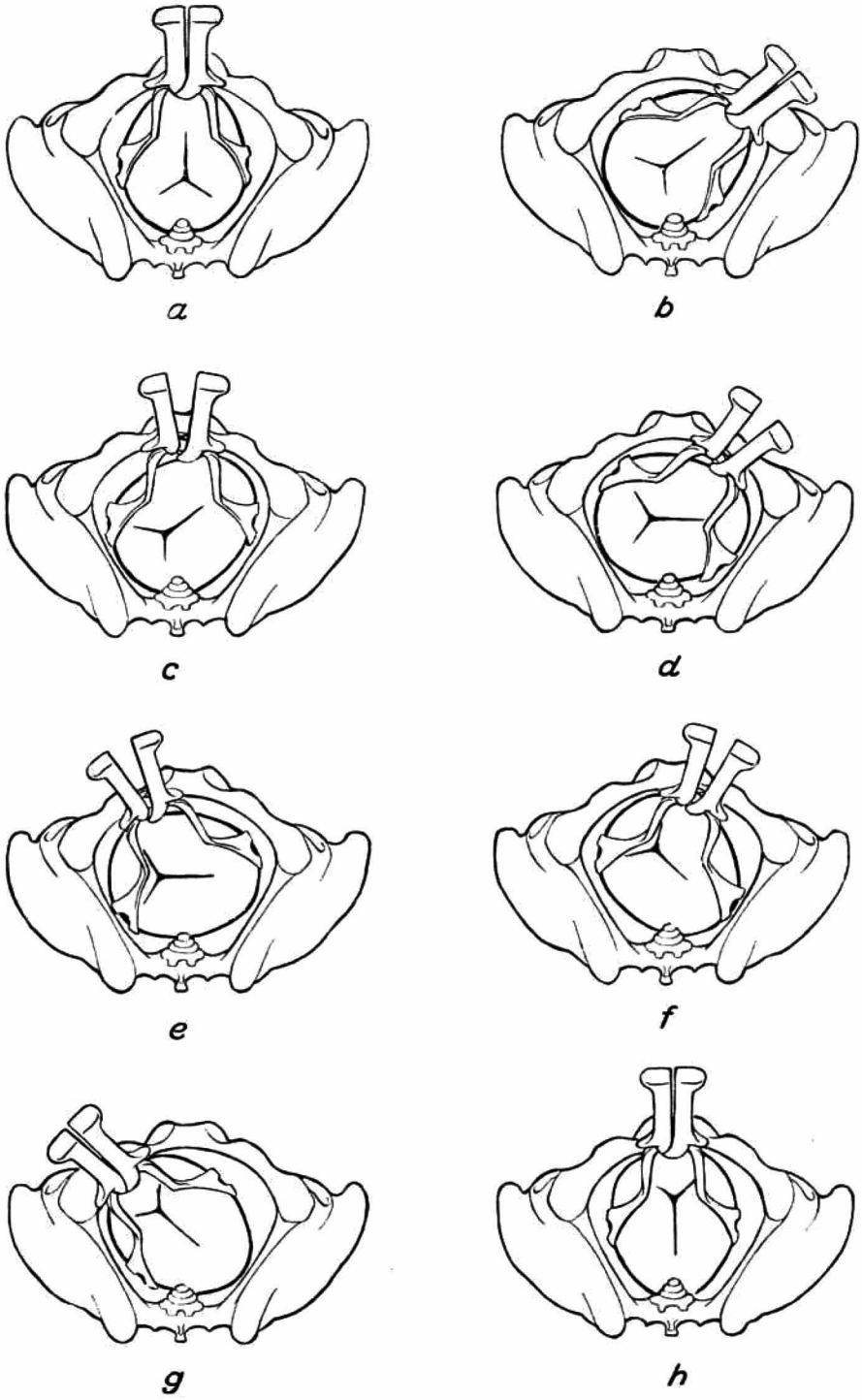

Fig. 2. The successive stages of forceps operation in occiput right posterior, O.D.P., which has become an occiput sacral, or O.180 degrees. The "key in lock" maneuver is being practiced and as the occiput turns anteriorly the forceps' blades are carefully readjusted.

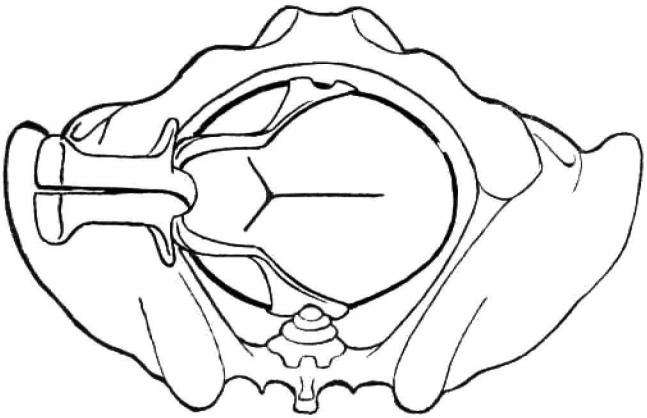

Fig. 3. Forceps applied to the head, O.D.T. (O.D.90 degrees) with the blades in the anteroposterior diameter of the pelvis. The head is grasped ideally but there is danger to the mother's soft parts.

use the hand which effected the rotation internally, to hold the head at the point of rotation gained until one blade of the forceps can be applied and this, acting like an old fashioned vectis will keep the head in its new position or indeed may increase the rotation; (5) he may fix the head at the furthest anterior point of rotation by means of a vulsellum attached to the baby's scalp. He should be sure not to try to turn the head with this instrument, it will tear out a piece of skin,—merely hold the head steady with it,—thus employed, no harm will result.

Should manual rotation fail, which very seldom happens if one goes about it *lege artis*, resource must be had to the forceps. Let me repeat, this article deals with the abnormal position *after* engagement. Before the head has sunk below the inlet, version is usually the choice. The operation of forceps in persistent occiput posterior positions may be very easy and very hard. Much depends on individual skill and considerable also upon the conformation of the pelvis and soft parts and the size of the baby and pelvis.

At the very outset of the discussion of forceps in occiput posterior positions we meet this question. May the forceps be used as a rotator or is it to be simply a tractor, adding to the downward movement of the head only that amount of rotation which nature gives the head in its passage, its progress being thus made a turbinal motion?

Levret, in 1746, said that the forceps should be a tractor and nothing else, to supply from below the force that was lacking from above. Smellie, in 1752, used his short, straight forceps as a rotator; Scanzoni, in 1865, developed an operation in which instrumental rotation was the main feature. Tarnier, in 1881, demonstrated the principle on which the forceps may be used to correct the position of the head in the pelvis. He pointed out that, because of the pelvic curve of the instrument, if one twists the handles, the blades, with the head in their grasp, do not turn on the axis of the shanks, but tend to describe part of a circle within the pelvis. In order, therefore, to make the head rotate around an axis, it is necessary to sweep the handles of the forceps through a large circle outside the pelvis. The apex of the forceps blades then will act as a center and the head will turn around on it. Bill has improved on Tarnier's maneuver by first raising the head out of the pelvic floor gutter, and then sweeping the handles around to impart the movement of rotation to the head within the pelvis. Kielland, in 1915, devised a forceps without pelvic curve, and with the blades bent a little downward. With this instrument a head may be grasped biparietally, no matter in which diameter it lies in the pelvis and it may, according to Kielland, be twisted safely to any position desired.

The dangers of using the forceps as a pure rotator, as Scanzoni and Tarnier did, are: the vagina and bladder may be torn from their attachments to the fascia and the bony pelvis; hæmatomata may be produced in the areolar tissue at the bases of the broad ligaments; the ureters may be stretched; and the baby's head and neck may suffer damage. If the head is pushed up too far, the cord may prolapse necessitating a hurried, forceful, and destructive extraction. With these things in mind I have devised a method of rotation of the head which combines several of these well known maneuvers, and for want of a

better term I have named it the "key in lock" operation. It really tries to imitate nature's process of push, twist, retract, untwist, and repeat, but we have to do them in reverse—push up, twist, pull, and repeat. We try to impress a wriggling motion on the head, which is not easy to describe.

With the head lying in the right oblique diameter, O.D. 135 degrees, the forceps blades are laid in the transverse of the pelvis. They will grasp the head diagonally, in an unfavorable manner, and are, therefore, to be held very delicately. Now, under the slightest possible compression, the head is pushed up about 2 centimeters in the axis of the birth canal and gently twisted, the small fontanel being brought forward not more than 5 degrees. This is done by sweeping the handles of the forceps through an arc of about 10 degrees outside the pelvis *à la methode Tarnier*. Then the head is pulled down a little in the axis of the pelvis, but less than it was pushed up. Repeat this maneuver two or three times, pushing the head up only as much as you pull down, and when the sagittal suture is transverse, i.e., O.D.T. or O.D. 90 degrees, the front of the forceps will now point to the left, and they will lie in the left oblique. Readjust them so that they will come to lie in the right oblique, grasping the head in a more favorable diameter, that is, the ideal manner. Indeed, sometimes the head slips around the rest of the way itself within the blades. By pushing up a little, twisting a little, and levering a very little (to overcome asynclitism), imparting a wriggling motion to the head not unlike fitting a key into a stubborn lock, one can usually coax the occiput to the front, whereupon the rest of the operation—the extraction, is completed without trouble. One should not hurry nor do too much turning at once, not more than 5 degrees; it is like taking mincing steps. Readjust the forceps *pari passu* as the rotation is effected (Fig. 2, A to H).

The prehension of the head at the beginning of this operation need not always be made as described. Variants must be recognized, but the principle does not change. Sometimes it is possible to lay the blades to the head anteroposteriorly in the pelvis with their front directed toward the small fontanel (Fig. 3). Again one may apply the forceps with the front toward the forehead (as in the Scanzoni maneuver), and when the occiput is brought into the anterior quadrant of the pelvis, remove them and reapply as for an anterior position.

In rare cases it is impossible to turn the occiput to the front either by manual effort, or by the forceps, or by a combination of the hands with the forceps. To force the issue would entail great damage to the mother and probably kill the baby; therefore we must observe and discover the mechanism intended by nature and then aid it. If the occipitosacral mechanism is inevitable, it is best to deliver the head in extreme flexion.

The application of the blades is made as usual, but the front of the forceps looks toward the forehead, which, from now on, becomes the point of direction. Locking the blades is the same as usual, but after they are locked the handles are raised a little toward the pubis in order to increase flexion. Traction is made on the parietal bosses, a little upward from the horizontal plane. This increases flexion, and it has happened, though I have never observed it, that, even as late as this, anterior rotation has occurred. The occiput is first delivered over the perineum, the forehead resting behind the pubis; then the brow and face come from under the pubis. Much power is often necessary, and it is advisable to perform episiotomy in primiparæ, as a rule, and almost always in multiparæ, to avoid extensive lacerations of the pelvic floor and sphincter. If conditions are favorable one might deflex the head and deliver as a face presentation. These cases are claimed by the Kielland forceps enthusiasts. Some accoucheurs prefer the axis traction forceps since the mobility they confer on the head allows the latter to adapt itself somewhat to the parturient passage, but for the man who knows the mechanism of labor and is willing to be guided by the action of the natural powers they are unnecessary, and in the hands of a man ignorant of the principles of obstetrics the instrument is too dangerous.

In cases in which great difficulty is experienced, an overlooked funnel pelvis will often be found, and the accoucheur will regret that he attempted delivery from below. Here again one should emphasize the necessity of careful antenatal examination and pre-partal decision as to the method of conduct in the approaching labor.