

AN

INAUGURAL DISSERTATION

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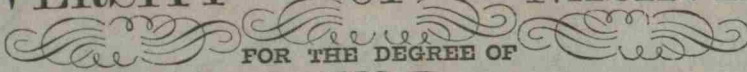
*Cephalo-Pelvic Adaptations*

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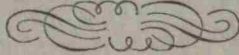
PRESIDENT, BOARD OF TRUSTEES, AND MEDICAL FACULTY

OF THE

UNIVERSITY OF NASHVILLE,



FOR THE DEGREE OF



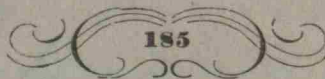
DOCTOR OF MEDICINE.

BY

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## Cephalo-Pelvic Adaptation.

The frequency of head presentation has elicited from the pens of Medical Philosophers various theories, which were intended to point out the causes that are brought to bear in its production.

The most reasonable explanation, and the one, which I believe generally prevails at present, is that it is dependent upon the greater weight of the superior parts of the child, especially during the earlier months of utero-ges-

weight

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tation. The frequency of head presentation has afforded the obstetric practitioner ample opportunities of observing the various adaptations, and their mechanism; and the physician, who fails to make himself acquainted with these adaptations, is not prepared to practice the art of midwifery successfully, and he ought not to be trusted. When we come to consider that there are two beings placed in a critical condition, and that the life of both depends upon

our knowledge of these adaptations, we cannot fail to feel impressed with the great responsibilities resting upon us, and this should prove a powerful incentive causing us to redouble our energies, and not stop until we are so thoroughly posted, that we can say, when called upon, this is the adaptation and the mechanism is thus, &c.

We will then admit of six cephalo-pelvic adaptations, and consider each adaptation and its mechanism seriatim.

The first adaptation is the one with which we most frequently meet, for out of 20,517 observed in Materite 15,682 were of this adaptation.

The head of the child in this adaptation is situated in the left oblique diameter of the superior strait, the posterior fontanelle behind the left acetabulum, while the anterior is situated before the right sacro-iliac junction. By the contraction of the uterus we have first what is denominated primary adaptation,

that is, the head of the child advances and recedes, and thus by these movements the promitory of the sacrum adapts the head to the oblique diameter. The head is now made to descend at the same time flexing it so as to make the chin rest on the breast, until it is arrested by the sacro-ischiatic ligaments of the left side, or the sacrum. It would now remain stationary were it not to change its relation, which it does by a slight twist at the

expense of the neck, and  
 by this movement the pos-  
 terior fontanelle is pla-  
 ced under the arch of  
 the pubes, and thus the  
 head adapts itself to the large  
 diameter of the inferior  
 strait. Now as the head  
 is urged forward the chin  
 begins to depart from the  
 breast, the vertex separa-  
 ting the external parts, it  
 now engages under the  
 pubes, now mounting  
 up towards the Mons  
 Veneris. In the extention,  
 the head described a quar-  
 ter of a circle backwards,  
 and in doing this, we see

the face has to pass over the middle line of the sacrum, coccyx, and perineum. The head now being expelled, the face turns most always towards the right thigh of the mother. The shoulders now offer, the right under the arch of the pubes, while the left is situated before the sacrum, and now by the contractions of the uterus they are made to descend lower and lower until the left issues forth from the inferior part of the vulva, while the right is freeing itself from under the arch of the pubes.



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The shoulders now being delivered, the rest of the body soon follows.

The second adaptation. Of the 20,517 there were of this adaptation 3,682. In this the posterior fontanelle is situated behind the right acetabulum, while the anterior is before the left sacro-iliac junction. The mechanism in this case is the same as in the first, except that the rotation is from right to left, instead of from left to right. There is but little more difficulty here than there is in the first, unless the return

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is impacted with hardened feces, which difficulty we can overcome by an injection.

The third adaptation.

In this adaptation, the posterior fontanelle is placed behind the symphysis of the pubes, and the anterior before the promontory of the Sacrum. If the head of the child be very small or the pelvis relatively large there is but little more difficulty in this than in either of the two former.

In this adaptation there is no rotatory motion.

The uterus contracting

the vertex is forced down in the axis of the pelvis, and escapes from the vulva in the same manner, as in the first and second adaptations. If the head becomes impact in the Superior Strait, we may convert it into the first or second adaptation. In order to convert it into the first, introduce the hand, gently raising the head and during the absence of pain with the index finger on the Saggittal suture, either before or behind the anterior fontanelle, press toward the left sacro-iliac symphysis.

In the 20517 cases there were but six of this adaptation.

The fourth adaptation.

This adaptation is necessarily more protracted and painful than any we have yet considered. The anterior fontanelle in this adaptation is situated behind the left acetabulum, while the posterior is before the right sacro-iliac symphysis.

By the contractions of the uterus the head is forced down in the pelvis until the right parietal bone comes in contact with the inferior portion of the sacrum. We now have the pivotlike motion, placing the anterior

fontanelle under the arch of the pubes, where it remains stationary until the vertex passes over the coccyx, and perineum. Now, as soon as the vertex escapes, the perineum will glide over the occiput back to the neck; the head now turns backwards towards the anus of the mother describing a quarter of a circle, and thus freeing the face entirely from the vulva. The face of the child now turns towards the left thigh of the mother. The shoulders now engage, the left under the arch of the pubes, the right before the sacrum,

and they are expelled in the same manner as in the former cases. Of the 20,577 there were of this adaptation 109. Now this adaptation may be converted into the second by placing the forefinger of the right hand on the saggittal suture, and pressing towards the left sacro-iliac junction. But before doing this, the parts must be in a proper condition, the os uteri being well dilated or dilatatable, the head occupying the superior strait, the waters being evacuated, &c. A knowledge of

the parts, the diameters of the fetal head, the maternal pelvis, and the relations of the soft parts, is sufficient, without comment, to show the propriety of converting this adaptation into the second, and the third and fifth into the first.

The fifth adaptation.

In the 20,517 births above mentioned there were of this adaptation only 92.

In this case the head is situated in the right oblique of the superior strait, the anterior fontanelle behind the right acetabulum, and the posterior before

the left sacro-iliac symphysis.

The mechanism of this is the same as the fourth, only the rotation being from right to left instead of from left to right, and escaping from the external parts in the same manner. We may convert this, as before stated, into the the first adaptation by pressing toward the right sacro-iliac junction.

This adaptation is more difficult than the fourth on account of the same cases which made the second more difficult than the first.



The sixth adaptation, Of the 20517 there but two of this adaptation. This is of very rare occurrence, so extremely rare that some have doubted its ever obtaining. And I am inclined to think that it can never obtain unless the head of the child is very small. The head in this adaptation is situated in the antero-posterior diameter of the superior strait, the anterior fontanelle behind the arch of the pubes, and the posterior before the promontory of the sacrum.

The mechanism of this is the same as the fourth and fifth only there is no rotation.

Then to recapitulate: of the six adaptations we have had the posterior fontanelle situated anteriorly in three, the other three the reverse, and in four rotation. The adaptations in which the posterior fontanelle was situated anteriorly, were the first, second and third; and of these there was rotation in two, in the first and second, and we can convert the other into the first.

The three, in which the posterior fontanelle was situated posteriorly, were the fourth, fifth and sixth; and here there was rotation in two, in the fourth and fifth; and the fourth can be converted into the second, and the fifth into the first; and furthermore that the sixth can never obtain when we have a well formed pelvis, a well developed child, and the primary movements of adaptation.