DIAGNOSIS OF THE ATTITUDE OF FOETUS IN UTERO BY EXTERNAL EXAMINATION.*

E. GUSTAV ZINKE, M. D.

Mr. President and Members of the Society: It may be truthfully stated that there is no department of medicine so generally practiced, yet so little studied and so especially neglected by the rank and file of the profession, as that of Obstetrics. In the brief space of 10 minutes granted for the reading of a paper, I will not waste a word in defence of this assertion. Those well informed, will acknowledge that it is but too true. The cause is twofold:

1st. Nature does her work so well that the majority of general practitioners trust to her and begin their efforts of finding the cause of delay, or send for aid and consultation only, when she fails to accomplish her task.

2nd. The colleges of the country, with a few praiseworthy exceptions, have not improved as much the method of teaching the art of midwifery as they have other less practical, though perhaps equally important departments.

It is an earnest appreciation of these two facts that has prompted me to come before you and dwell upon a subject so simple, though not old, that it is readily lost sight of and forgotten by those who know it once, so easy of acquirement to those to whom it may be new, and so interesting in itself that it rarely fails to attract attention, even on the part of those who continue to deny the possibility of making a diagnosis of the various presentations of the fœtus and their different positions at any time before labor.

In a large obstetric practice, extending over a period of 25 years, and including private, hospital and out-door clinical experience, I am ready to maintain that: *In nine cases out of ten,*

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the attitude of the foetus can be established, during the last ten weeks of gestation, by the external means of diagnosis alone.

It has often surprised me that the majority of general practitioners are so little concerned about the attitude of the fœtus, the capacity of the woman's pelvis and the prophylaxis of puerperal sepsis. (My remarks must, for want of time, be limited to the first of these.)

Is it necessary to say a word as to the importance of knowing the presentation and its position before the event of labor? If so, let it be brought out in the discussion.

The diagnosis of the position of the fœtus in utero is made by inspection, palpation and auscultation.

By the first we determine the contour, size and position of the uterus, and frequently also the fœtal movements may be observed.

By the second we locate the movements, the head and back of the fœtus.

By the third we find the site where the impulse of the fœtal heart can be heard with greatest intensity.

The recumbent position, with patient upon a bed, cot or lounge, and lying upon her back, all clothes (except a night-gown) removed, the abdomen bared or covered with a light sheet only, is the most favorable posture and condition for a successful examination.

In order to be as exact as possible, the anterior abdominal surface is divided into four quadrants by two real or imaginary lines; one extending along the median line from the tip of the ensiform cartilage above, to the middle of the symphysis pubis below; the other crosses the first at right angles on a level with the umbilicus. (Fig. 1 to 4, lines ab and cd.) The four spaces thus obtained are called, respectively, *the right and left upper, and the right and left lower abdominal quadrants.*

INSPECTION.

(With lower extremities extended.)

If, upon inspection, we find that the long diameter of the pregnant uterus runs from below upward, as is indicated by the

continuous lin u u., in Figs. 1 and 2, representing the uterus, we know at once that the child it contains lies with its long diameter in the same direction; the head either opposite the internal os or the fundus. The locality of the head is indicated by the locality of the fœtal "movements" (the feet). They may be seen on inspection or felt upon palpation. If, under the condition represented in Figs. 1 and 2, the movements of the feet can be seen or felt high up near the fundus, we have—very likely—a vertex presentation; if low down, in the pubic or iliac regions, the breech probably presents.

PALPATION.

(With lower extremities flexed and abdominal wall relaxed.)

If, upon palpation, we can definitely locate the movements of the feet, we at once palpate for the round, hard mass of the fœtal head in a region directly opposite to that where the movements are felt. Thus if the feet are found to be near the fundus, the head will be discovered near the pubes and vice versa. Having determined the residence of both head and feet, the back of the child may be traced between the two and will be found on the mother's left or right side, as the case may be.

AUSCULTATION.

(With lower extremities extended.)

If, upon auscultation, the fœtal heart's impulse is heard distinctly below the level of the umbilicus, the head is probably nearer the pelvic inlet than the fundus uteri; and vice versa if it be heard above the level of the umbilicus. On whatever side of the median line the fœtal heart may best be heard there lies the back of the child.

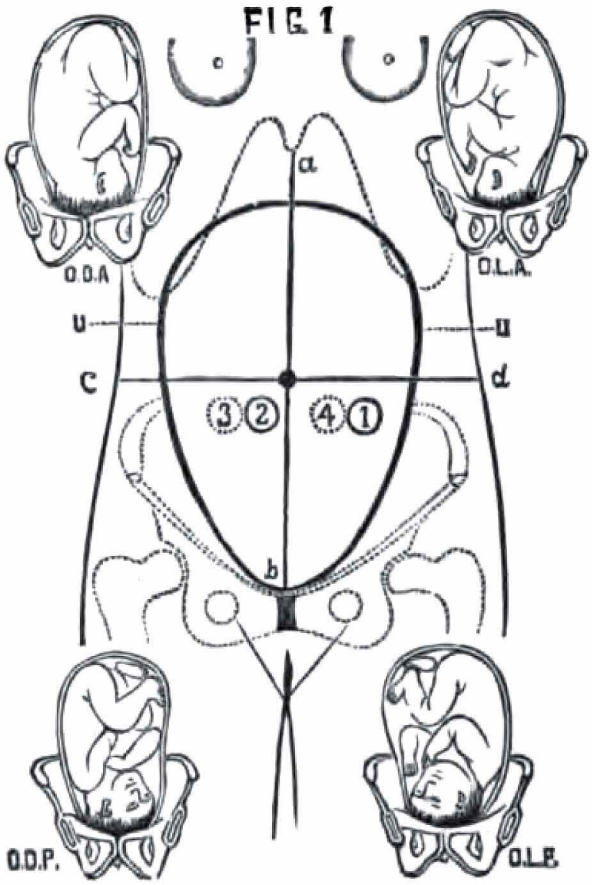
Thus the questions to be answered in each examination are:

1. In which direction lies the longest diameter of the uterus?
2. Where are the fœtal movements to be seen or felt?
3. Where is the fœtal heart to be heard with greatest intensity?
4. In what part of the uterine cavity lies the head or breech of the child?

DIAGNOSIS OF VERTEX PRESENTATIONS.

First Position of the Vertex. (Compare O. L. A., Fig. 1.)

The long diameter of the uterus is found in the long axis of the mother's body; the fœtal movements are seen or felt in right upper quadrant near the fundus; the head will be felt behind



FOUR POSITIONS OF THE VERTEX.

O. L. A. Occipito-lœva anterior.
O. D. A. Occipito-dextra anterior.
O. D. P. Occipito-dextra posterior.
O. L. P. Occipito-lœva posterior.

1, 2, 3, 4. Site where fœtal heart may be heard with greatest intensity in the various positions of the vertex presentations. Solid circle indicates the sound as plainly audible; the dotted circle, as feebly audible. In the former the back of the child rests anteriorly; in the latter, posteriorly. U. U. Uterus.

the pubes, and the fœtal heart will be heard with greatest intensity in the left lower quadrant at 1, Fig. 1.

Fourth Position of the Vertex. (Compare O. L. P., Fig. 1.)

(Exceedingly rare.) If it does exist: The long diameter of the uterus is as before; the fœtal movements are much more distinct, high up and in the right upper quadrant; the head will be plainly felt behind the pubes; but the back of the child is not readily palpable and the fœtal heart's impulse, if audible, is much less distinct and perhaps nearer the median line in the left lower quadrant at 4, Fig. 1.

Second Position of the Vertex. (Compare O. D. A., Fig. 1.)

The long diameter of the uterus is as before; the fœtal movements are seen or felt in the left upper quadrant near the fundus; the head is felt behind the pubes; the fœtal heart may be distinctly heard in the right lower quadrant at 2, Fig. 1.

Third Position of the Vertex. (Compare O. D. P., Fig. 1.)

The long diameter of the uterus as above; the fœtal movements are seen or felt much more distinctly in the left upper quadrant near the fundus; the head will be plainly felt near the pelvic inlet; the back is not easily palpable; the fœtal heart sound may be entirely absent or, if audible, is only feebly heard at 3, Fig. 1.

DIAGNOSIS OF BREECH-PRESENTATIONS.

Dorso-anterior and to the left. (Compare D. L. A., Fig. 2.)

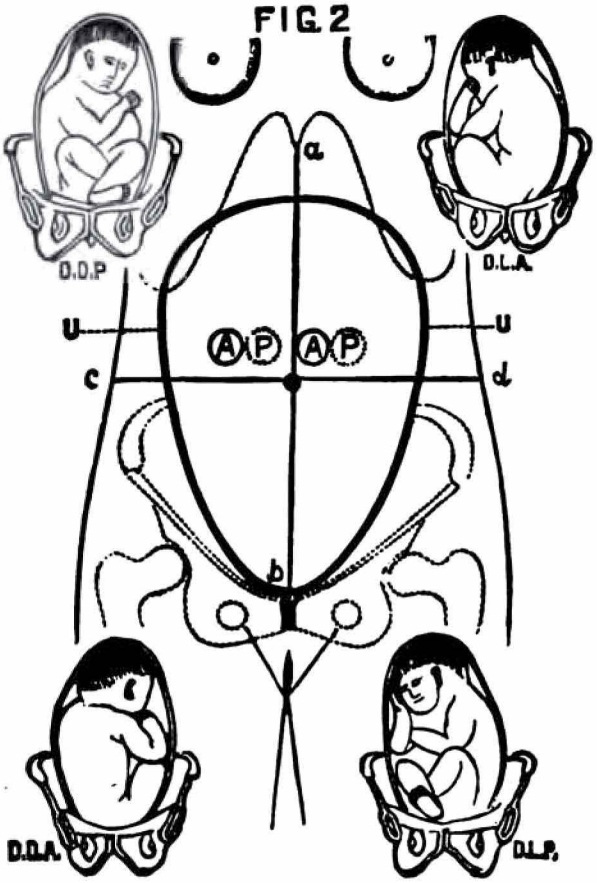
Long diameter of the uterus as in vertex presentation, fœtal movements are found in the right lower quadrant and posteriorly; fœtal head, more or less, in right upper quadrant at the fundus; back of the child is to the mother's left and anterior; fœtal heart is distinctly heard in the left upper quadrant near the median line and not far from the umbilicus, at A, Fig. 2.

Dorso-posterior and to the left. (Compare D. L. P., Fig. 2.)

The same as the last; but the fœtal movements are very distinct, low down, anteriorly and to the right; the back is not

easily outlined; the fœtal heart, if audible at all, is found in the left upper quadrant at P, Fig. 2.

FIG. 2



THE FOUR POSITIONS OF THE BREECH.

D. L. A. Dorso-lœva anterior.
D. D. A. Dorso-dextra anterior.
D. D. P. Dorso-dextra posterior.
D. L. P. Dorso-lœva posterior.

A and P. Site where the fœtal heart may be heard with the greatest intensity in the various positions of breech presentations. Solid and dotted circles indicate the same as in Fig. 1. U. U. Uterus.

Dorso-anterior and to the right. (Compare D. D. A., Fig. 2.)

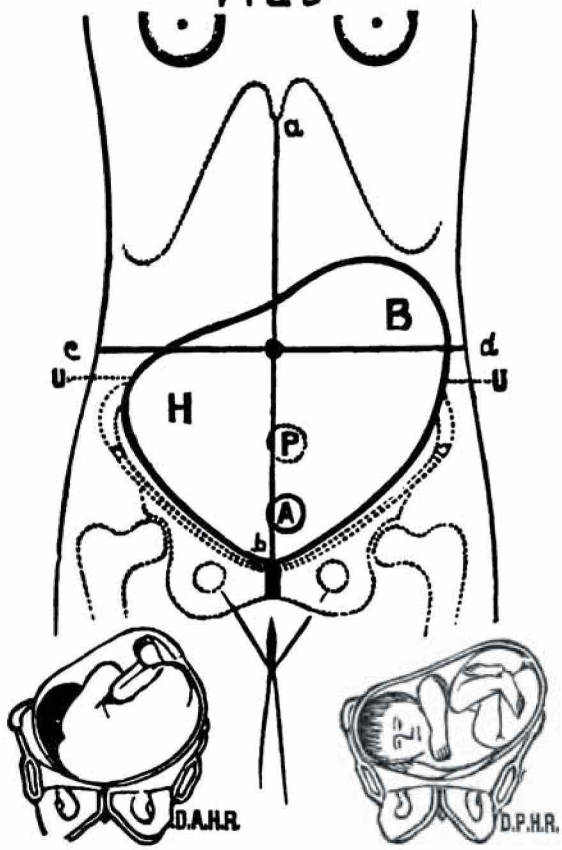
The same as in D. L. A., except that the back of the fœtus is felt anteriorly and to the right; the fœtal movements are felt in the left lower quadrant and posteriorly; the fœtal heart is heard distinctly in the right upper quadrant at A, Fig. 2.

Dorso-posterior and to the right. (Compare D. D. P., Fig. 2.)

Like the preceding, except that the fœtal movements are felt

anteriorly, to the left and low down, and that the fœtal heart sound may not be audible, or but feebly present in right upper quadrant at P, Fig. 2.

FIG 3



HEAD LOW VARIETY OF OBLIQUE OR TRANSVERSE PRESENTATIONS.

D. A. H. R. Dorso-anterior, head to right.
D. P. H. R. Dorso-posterior, head to right.
H. Locality of the head.
B. Locality of the breech.
A. Locality of the fœtal heart in dorso-anterior.
P. Locality of the fœtal heart in dorso-posterior.
U. U. Uterus.

DIAGNOSIS OF OBLIQUE, TRANVERSE OR SHOULDER-PRESENTATIONS.

Dorso-anterior, head low and to the right. (Compare D. A. H. R., Fig. 3.)

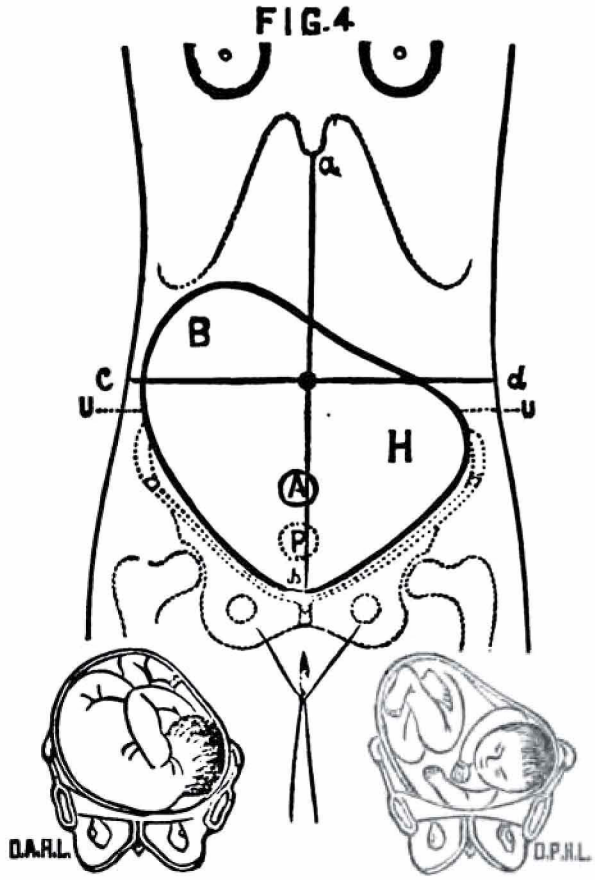
Long diameter of the uterus from side to side. Head can be distinctly felt at H, Fig. 3; the breech may be easily outlined at

B, Fig. 3; fœtal movements are felt in left hypochondriac region, posteriorly; the back of the child can be traced along the anterior abdominal wall, and the fœtal heart is heard with greatest intensity immediately above the symphysis a little to the left of the median line at A, Fig. 3.

Dorso-posterior, head low and to the right. (Compare D. P. H. R., Fig. 3.)

Long diameter of the uterus as in the former. Head and breech also in the same region; but the fœtal movements can be seen and felt all over the lower anterior abdominal wall and the fœtal heart sound, if heard at all, is very feeble and may best be heard at P, Fig 3.

FIG. 4



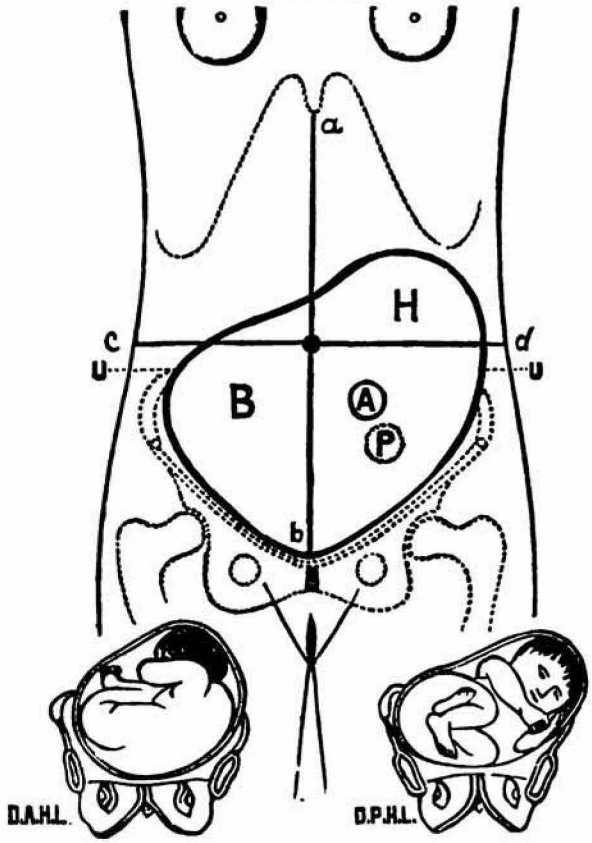
HEAD LOW VARIETY OF PRESENTATIONS, OBLIQUE OR TRANSVERSE.

D. A. H. L. Dorso-anterior, head to left.
D. P. H. L. Dorso-posterior, head to left.
H., B., A., P. Same as in Fig. 3.
U. U. Uterus.

Dorso-anterior, head low and to the left, and dorso-posterior head low and to the left. (Compare D. A. H. L. and D. P. H. L., Fig. 4.)

These two positions show exactly the reverse of the two preceding. At H, the head; at B, the breech; at A, the fœtal heart is plainly audible in dorso-anterior; at P, the heart is feebly audible, if dorso-posterior. In dorso-anterior position the back is easily recognized below the level of the umbilicus; in dorso-posterior, the feet will be felt instead.

FIG. 5



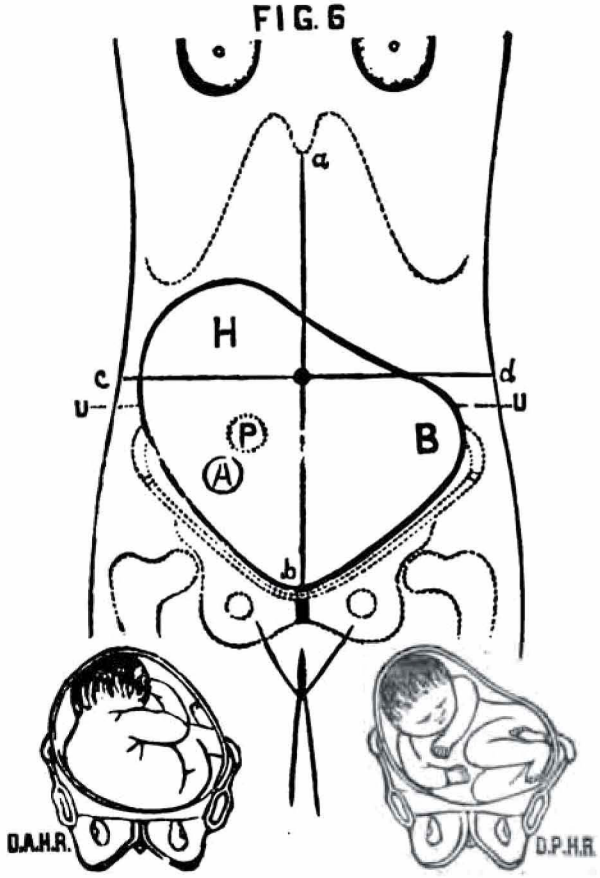
HEAD HIGH VARIETY OF OBLIQUE OR TRANSVERSE PRESENTATIONS.

D. A. H. L. Dorso-anterior, head to left.
D. P. H. L. Dorso-posterior, head to left.
H., B., A., P., and U., U., as in Figs. 3 and 4.

In those rare instances, when the head rests higher than the breech, as indicated by H and B. Figs. 5 and 6, there is no change from the former in the shape of the uterus; the head, the breech,

back and extremities of the fœtus are as easily determined as in the head-low varieties; but in the one, the fœtal heart's action will be heard decidedly to the left, in the other to the right, of the median line and below the level of the umbilicus, as indicated in Figs. 5 and 6 and by A and P.

FIG. 6



HEAD HIGH VARIETY OF OBLIQUE OR TRANSVERSE PRESENTATIONS.

D. A. H. R. Dorso-anterior, head to right.
D. P. H. R. Dorso-posterior, head to right.
H., B., A., P., and U., U., as in Figs. 3, 4 and 5.

I have purposely excluded from this paper face and complex presentations. Face presentations before labor are so rare that it is almost needless to look for them. I have never seen one myself or, at least, have never discovered one until after the first stage of labor was well advanced and the membranes ruptured. Still, there is no doubt that even in primary face presentations the diagnosis may be made, in some cases, by the external means of diagnosis. But in the preponderence of this class of cases, as

in complex presentations, a diagnosis can only be made by the combined method of examination with or without the introduction of the whole hand into the vagina or uterus after the membranes have ruptured and the os sufficiently dilated to admit of the introduction of the finger or the hand into the uterine cavity.

More might be said, but I must not exceed the limits of my time. What there may be wanting, let it be brought out in the discussion.

13 Garfield Place, Cincinnati, Ohio.