

OBSTETRICS 101

PERIPARTUM MANAGEMENT OF NORMAL PREGNANCY

"WHAT'S GOING ON IN HERE?" (Baby circa 1995)

LEOPOLD'S MANEUVERS

Standing to the side and facing the mother's head:

1. Palpating, with both hands, the uterine fundus to determine

PRESENTATION ("the presenting part"): that portion of the fetus in closest proximity to the birth canal, i.e., cephalic, breech, shoulder presentations.

2. Palpating, with both hands simultaneously, the sides of the uterus to locate the fetal back and determine (with about 99% certainty) THE

POSITION: the relationship of a given landmark on the fetus to the mother's right and left (Therefore there are two basic positions = RIGHT AND LEFT). Knowing where the back is (RIGHT OR LEFT) tells you the position 99% of the time.

Cephalic landmarks: occiput (vertex); sinciput (brow); mentum (face).

Breech landmark: sacrum

Shoulder landmark: acromion process of the scapula AND

LIE: the relationship of the long axis of the baby to the long axis of the mother, i.e. longitudinal, transverse and oblique lies.

3. Pawlik's grip -- grasping with the thumb and fingers of one hand, the lower portion of the maternal abdomen just above the symphysis thus confirming the impressions of the First Maneuver as well as providing information ABOUT

ENGAGEMENT: when the biparietal diameter of the fetal head reaches or passes the plane of the pelvic inlet.

Standing to the mother's side and facing the mother's feet:

4. With the fingers of each hand on the sides of the uterus suprapubically, exerting deep pressure in the direction of the axis of the pelvic inlet to reinforce the impression of engagement or lack thereof and to determine the

ATTITUDE: the relationship of the long axis of the fetal head to the long axis of the fetal trunk (neck flexed, neutral or extended)

AS WELL AS THE LOCATION OF THE

CEPHALIC PROMINENCE: that portion of the baby's head first encountered with the Fourth Maneuver, enabling the examiner to determine which fetal landmark to use to ultimately determine position.

When the cephalic prominence is on the side opposite the baby's back, the occiput (vertex) is presenting.

When the cephalic prominence is on the same side as the baby's back, the mentum (face) is presenting.

When the cephalic prominence seems the same on both sides, the sinciput (brow) is presenting.

(When there is NO cephalic prominence, the head may be way down in the pelvis or the breech may be presenting.)

A more thorough knowledge of the orientation of the presenting part in the maternal pelvis is quite important particularly in certain cephalic presentations. This requires the information gained from a properly performed pelvic exam to determine

VARIETY: the relationship of a given landmark on the fetus to the mother's anterior-posterior orientation. [Thus for each position there are three varieties: anterior, transverse and posterior. Since there are only two positions there is a total of six varieties for each arbitrary fetal landmark (except for shoulder presentations).]

Occiput: ROA, ROT, ROP, LOA, LOT, LOP

(Sinciput: RSiO, RSiT, RSiP, LSiA, LSiT, LSiP)

Mentum: RMA, RMT, RMP, LMA, LMT, LMP

Breech: RSA, RST, RSP, LSA, LST, LSP

Acromion: RAA, RAP, LAA, LAP

"HOW TO I GET OUT OF HERE?" (op. cit.)

MECHANISMS OF LABOR

1. **DESCENT:** the baby must go down to go out. Two factors stand out:

- The cogwheel-like effect of the uterine musculature in active labor
- The action of the maternal abdominal wall musculature in the second stage of labor

LABOR: Prodromal phase -- from the onset of regular contractions to about 4.0 cm cervical dilation

Active phase -- from 4.0 cm dilation to delivery of the placenta

STAGES OF (ACTIVE) LABOR: First stage - to complete dilation

Second stage - from complete dilation to delivery

Third stage - to delivery of the placenta

2. **ENGAGEMENT:** when the biparietal diameter of the fetal skull reaches or passes through the plane of the pelvic inlet.

Engagement is determined by the relationship of the leading edge of the presenting part to the plane of the midpelvis (i.e. the plane of least pelvic dimensions); the transverse measurement of which is the interspinous diameter (the distance between the ischial spines). When the leading edge of the presenting part (the vertex 95% of the time) reaches the plane of the midpelvis, the station is said to be zero ("0"). If the presenting part is judged to be one centimeter above the spines, the presenting part is said to be at minus one station ("-1"); if two centimeters below the spines, at plus two station ("+2"). The range is usually expressed from "minus three to plus three"; anything above is regarded as "floating" and anything below as about ready to deliver. On the average baby, the distance between the occiput and the plane of the biparietal diameter is about 3 1/2 to 4 centimeters whereas the distance separating the plane of the pelvic inlet from the plane of the mid pelvis is 4 1/2 to 5 centimeters; therefore engagement may sometimes occur at a "-1" station. Molding of the fetal skull and caput formation may be misleading when judging station. Descent of the breech may be evaluated in the same manner but remember that engagement does not occur until the biparietal diameter reaches the level of the pelvic inlet.

3. **FLEXION:** the mechanism whereby the attitude of the infant's head is modified as descent occurs. Flexion may occur be flexion (occiput presenting) or extension (face presenting). (Think of a lever system.)
4. **INTERNAL ROTATION:** turning of the presenting part (the occiput 95% of the time) in the birth canal. This is a function of an intact pelvic floor usually resulting in the occiput rotating anteriorly (OA).

AS LABOR PROGRESSES FLEXION AND EXTENSION MUST BE UNDONE.

5. **EXTENSION:** because the birth canal is in essence a truncated cylinder extension allows the resultant force of the posteriorly directed uterine forces and the anteriorly directed pelvic floor forces to be directed toward the vulvar opening away from the posterior perineal tissues. Extension also may occur by flexion or extension.

6. **EXTERNAL ROTATION (RESTITUTION):** with the head now delivered, as further descent occurs, the shoulders undergo internal rotation and the head naturally lines up with the baby's trunk.

"GET ME OUT OF HERE!" (op. cit.)

7. **EXPULSION:** Get a good grip! Congrats, you've just delivered a baby!

HEO/kdt

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