



## **Chapter 11**

### **ABDOMINAL PALPATION (LEOPOLD'S MANOEUVRES)**

"Abdominal examination can be conducted systematically employing the four maneuvers described by Leopold and Sprolin in 1894. The mother should be supine and comfortably positioned with her abdomen bared. These maneuvers may be difficult to perform and interpret if the patient is obese, if there is excessive amniotic fluid, or if the placenta is anteriorly implanted."<sup>1</sup>

#### **Method**

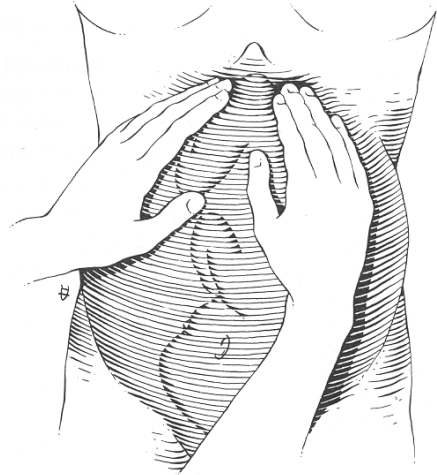
1. Prior to abdominal palpation, ask the woman to empty her bladder.
2. Have the woman lie on her back, with a pillow under her head and her knees slightly bent, arms at her side. Be alert for symptoms of supine hypotension. Turn the woman on her side if she experiences dizziness, faintness, nausea, or pallor. The woman's abdomen should be completely exposed from below the breasts to the symphysis.
3. The examiner's hands should be washed and warmed.
4. Standing on the woman's right side, inspect the abdomen for uterine shape. A low and broad uterus will be an indication of transverse lie.
5. Using a tape measure, measure the symphysis/fundal height in centimeters. After 20 weeks gestation the fundal height in centimeters should approximate the weeks of gestation  $\pm$  4 centimeters in a singleton pregnancy.
6. In palpating the abdomen, use the pads of the fingers rather than the fingertips in a deep, smooth movement instead of a sudden pressure or rough manipulation.

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<sup>1</sup> Cunningham et al, *Williams Obstetrics*, 22<sup>nd</sup> edition, 2005, p412

7. **First Manoeuvre**–(figure 1)–to determine what is in the fundus

- i. Face the patient’s head
- ii. Use both hands to palpate the fundus
- iii. A mass is felt – is it head or buttocks?



**Figure 1**

Consider:

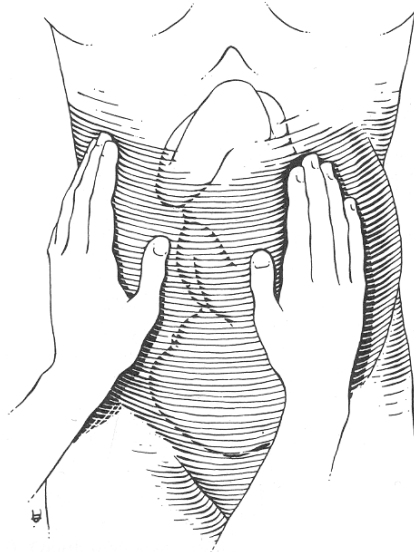
- Consistency – the head is harder than the buttocks
- Shape – the head is round
- Mobility – the head moves independent of the trunk  
- the breech moves with the trunk

8. **Second Manoeuvre**–(figure 2)–to locate the back of the fetus in relation to the right or left side of the mother.

- i. Face the patient’s head
- ii. Use the palms of both hands, one on either side of the abdomen, so that one hand steadies the uterus while the other palpates using a slight circular motion from the top of the uterus to the lower segment, feeling for fetal outline
- iii. Palpate the other side, reversing the functions of the hands

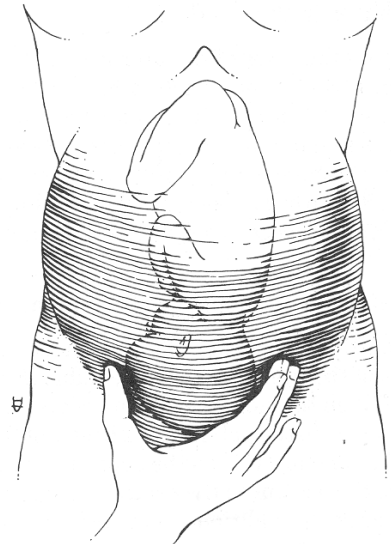
Consider:

- The back will feel smooth and hard
- The knees and elbows will have numerous angular nodulations



**Figure 2**

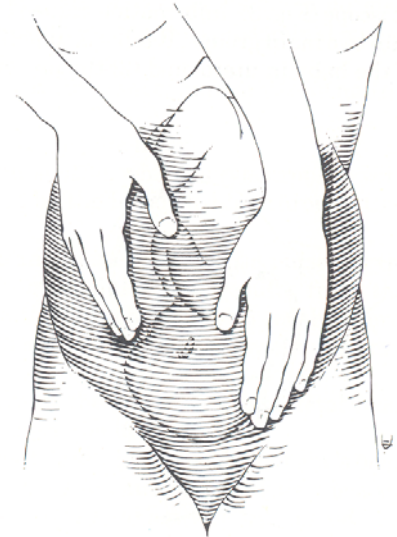
9. **Third Manoeuvre** – (figure 3) – to determine what is lying in the pelvic inlet and to determine its mobility (most important because the findings aid in diagnosing presentation, position, and engagement)
- i. Face the patient's head
  - ii. Gently grasp the lower portion of the abdomen just above the symphysis pubis, using the thumb and fingers of one hand
  - iii. If the presenting part is unengaged, a moveable body will be noted which may be gently ballotted



**Figure 3**

10. **Fourth Manoeuvre**–(figure 4)–to locate the cephalic prominence to assist in diagnosing descent into the pelvis




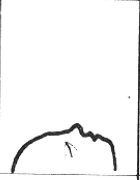


**Figure 4**



- i. Face the patient’s feet
- ii. The fingers of both hands are moved gently down the sides of the uterus toward the pubis
- iii. The cephalic prominence is located on the side where the greatest resistance is felt

Consider:

- o If the prominence is located on the opposite side from the fetal back, the head is said to be well flexed
  - o If the prominence is located on the same side as the back, the head is said to be extended (face presentation)
- iv. To assess the degree of engagement of the presenting part, while the woman is slowly exhaling, the fingers are directed further down into the pelvis. (see figure 5).

| $\frac{5}{5}$   | $\frac{4}{5}$   | $\frac{3}{5}$   | $\frac{2}{5}$   | $\frac{1}{5}$   | $\frac{0}{5}$   |
|---|---|---|---|---|---|
| Sinciput & Occiput above the brim   | Sinciput prominent<br>Occiput descending  | Sinciput rising<br>Occiput can be tipped  | Sinciput not so prominent   | Sinciput<br>Occiput not felt  | Head on pelvic floor  |
|  |  |  |  |  |  |
| Brim  |   |   |   |   |   |

**Figure 5**

Abdominal palpation in fifths to determine descent of the fetal head.

## **References**

Figures 1 through 4 reprinted with permission

1. Harry Oxorn, *Human Labour & Birth*, 5<sup>th</sup> ed., Appleton & Lange, Norwalk, 1986, pp. 77-79.

Figure 5 reprinted with permission

2. Margaret F. Myles, *Textbook for Midwives*, 10<sup>th</sup> ed., Churchill Livingstone Inc., New York, 1985, p. 135.