<u>Arabian Gulf University – Kingdom of Bahrain</u> Year 5 – Gynecology and Obstetrics – 1st Week

Salmanya Medical Complex – Dr. Hatem – Mechanisms and Stages of Labour



- <u>In labour, we have three important elements:</u>

- Passenger (represented by the fetus).
- Passage (through the pelvis).
- Power (to push the fetus through the pelvis during the process of delivery).
- Passenger (the fetus):
 - In normal labour, the most important issue is to know the vertex of the skull of the fetus.

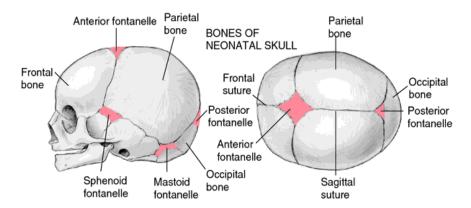
• The vertex is composed of five bones:

- ✓ Two frontal bones.
- ✓ Two parietal bones.
- ✓ One occipital bone.

Notice that these bones are joined by what is known as sutures.

• The vertex also has two fontanels:

- ✓ <u>Anterior fontanel</u>: which closes within the first year of life.
- ✓ <u>Posterior fontanel</u>: which closes at the time of birth.

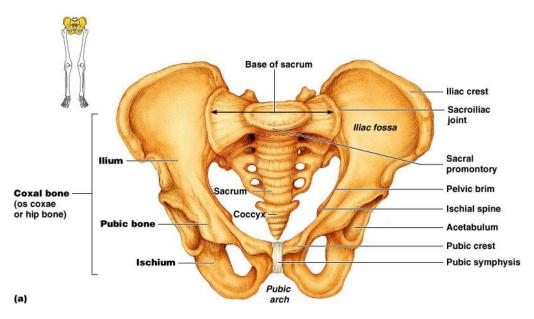


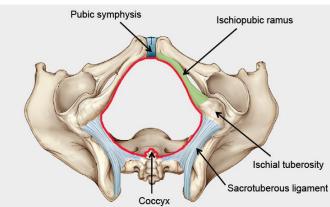
• Bi-parietal diameter is the most important thing to focus on during delivery (why?) → because it represents the widest diameter of the vertex.



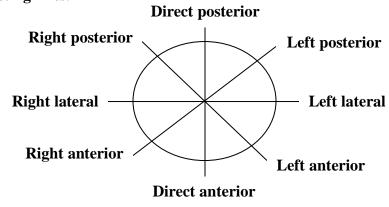
- ✓ BPD: Bi-Parietal Diameter
- ✓ OFD: Occipito-fFrontal Diameter
- What are the denominators for fetal presenting parts?
 - ✓ Head: occiput.
 - ✓ <u>Buttocks</u>: sacrum.
 - ✓ Should<u>ers</u>: tip of scapula.
- Passage (through the pelvis):
 - What is the normal anatomy of the pelvis?
 - ✓ Notice that the pelvic inlet is oval in shape while the pelvic outlet is rhomboid. Therefore, how would the head of the fetus pass through the pelvis without any injuries?







- The pelvis was divided into four part -at the beginning- to know where the head of the fetus is passing:
 - ✓ Right Anterior (RA).
 - ✓ Right Posterior (RP).
 - ✓ Left Anterior (LA).
 - ✓ Left Posterior (LP).
- Then, it was found that the head of the fetus rotates inside the pelvic in 1/8 of a circle. Therefore, the pelvis was divided into eight parts by adding two more intersecting lines.



• When you know where is the denominator \rightarrow you will know if the rotation of the fetus is in the right position.

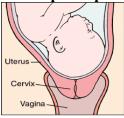


- What are the characteristics of true labour pain?
 - ✓ Painful.
 - ✓ Regular.
 - ✓ Continuous.
 - ✓ Increased frequency.
- False labour occurs at 24 gestational weeks until symptoms of true labour come again. Characteristics of false labour are the opposite of true labour.

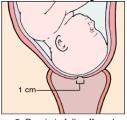
Differences Between False Labor and True Labor

Type of Change	False Labor	True Labor
Timing of contractions	Often are irregular and do not get closer together (called Braxton Hicks contractions)	Come at regular intervals and, as time goes on, get closer together. Each lasts about 30–70 seconds.
Change with movement	Contractions may stop when you walk or rest, or may even stop with a change of position	Contractions continue, despite movement
Strength of contractions	Usually weak and do not get much stronger (may be strong and then weak)	Increase in strength steadily
Pain of contractions	Usually felt only in the front	Usually starts in the back and moves to the front

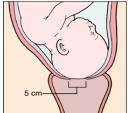
• During labour, the cervix opens up to 10 cm wide (nearly 1 cm each hour).



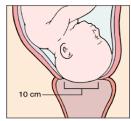
 Cervix is not effaced or dilated.



2. Cervix is fully effaced and dilated to 1 cm.

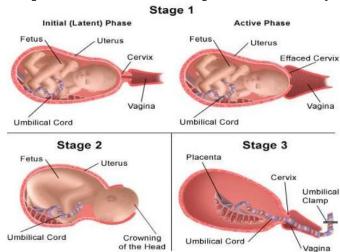


3. Cervix is dilated to 5 cm.



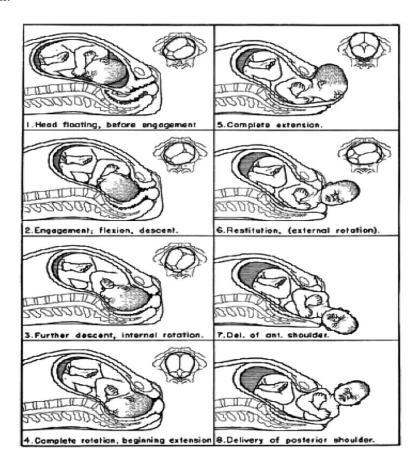
4. Cervix is fully dilated to 10 cm.

- Notice that the muscle fibers of levator ani from both sides are directed: downward, forward and outward equal to the direction of expulsion of the baby.
- Please review terminologies used in obstetrics from Dr. Zinab Al-Juffairi lecture note.
- Stages of labour:
 - **Stage-I:** from experiencing true labour pain to full cervical dilation.
 - **Stage-II:** from full cervical dilation to delivery of the baby.
 - **Stage-III**: is represented by delivery of the placenta.



While the baby is descending through the pelvis → these are the steps which will occur:

- Engagement.
- Full flexion of the head.
- Internal rotation.
- Extension.
- Restitusion.



- In the exam:

- When you are asked about the clinical picture, you must talk about:
 - ✓ History.
 - ✓ Signs.
 - ✓ Symptoms.
- When you are asked about diagnosis, you must talk about:
 - ✓ Clinical picture (history, signs and symptoms).
 - ✓ Investigations.
 - ✓ Differential diagnosis.
- When you are asked about management, you must talk about:
 - ✓ Clinical picture (history, signs and symptoms).
 - ✓ Diagnosis (clinical picture, investigations and differential diagnosis).
 - ✓ Treatment.