



SNS COLLEGE OF ALLIED HEALTH SCIENCES

SNS Kalvi Nagar, Coimbatore - 35

Affiliated to Dr MGR Medical University, Chennai

DEPARTMENT OF B.Sc. PHYSICIAN ASSISTANT

COURSE NAME: OBSTETRICS

II YEAR

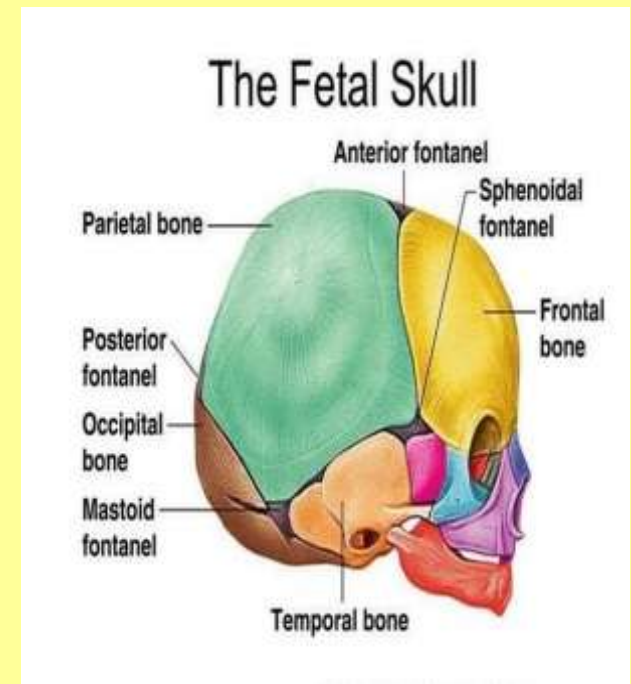
UNIT I

TOPIC 1: FETAL SKULL



INTRODUCTION

- The fetal head is large in relation to the fetal body compared with adult. Adaptation between the skull and the pelvis is necessary to allow the head to pass through the pelvis during labour without complication.





PARTS OF FOETAL SKULL

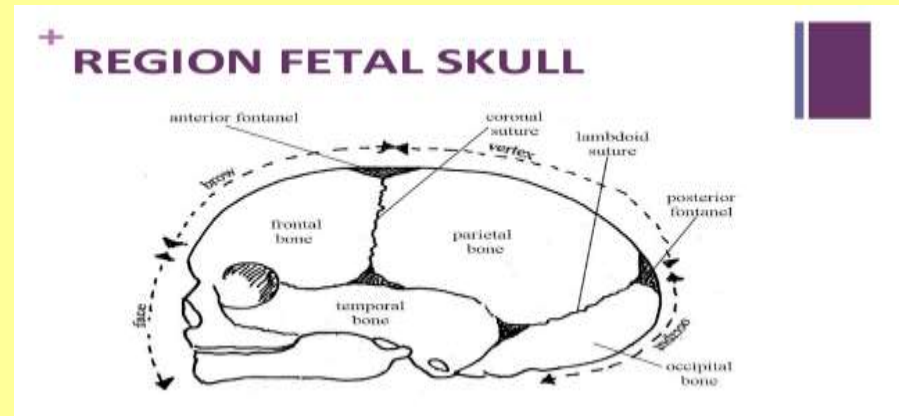
. The skull bones encase and protect the brain. Fetal skull is compressible, and made mainly of thin pliable tabular(flat) bones forming the vault.

The fetal skull has three major parts

- Vault of the cranium (Roof)
- Face
- Base

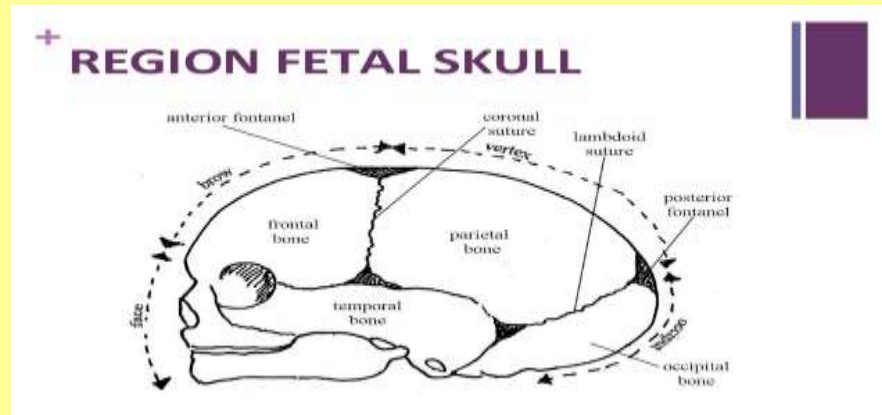
PARTS OF FETAL SKULL....

- **VERTEX:** It is a quadrangular area bounded anteriorly by the bregma and coronal suture behind by the lambda and lambdoidal sutures and laterally by lines passing through the parietal eminences.



PARTS OF FETAL SKULL..

- **BROW** : It is an area bounded on one side by the anterior fontanelle and coronal sutures and on the other side by the root of the nose and supra-orbital ridges of either side.





PARTS OF FETAL SKULL

- **FACE** : It is the area bounded by the root of the nose and supra- orbital ridges and on the other, by the junction of the floor of the mouth with neck.
- **SINCIPUT** : It is the area lying in front of the anterior fontanelle and corresponds to the area of brow.
- **OCCIPUT** : It is the area limited to the occipital bone.

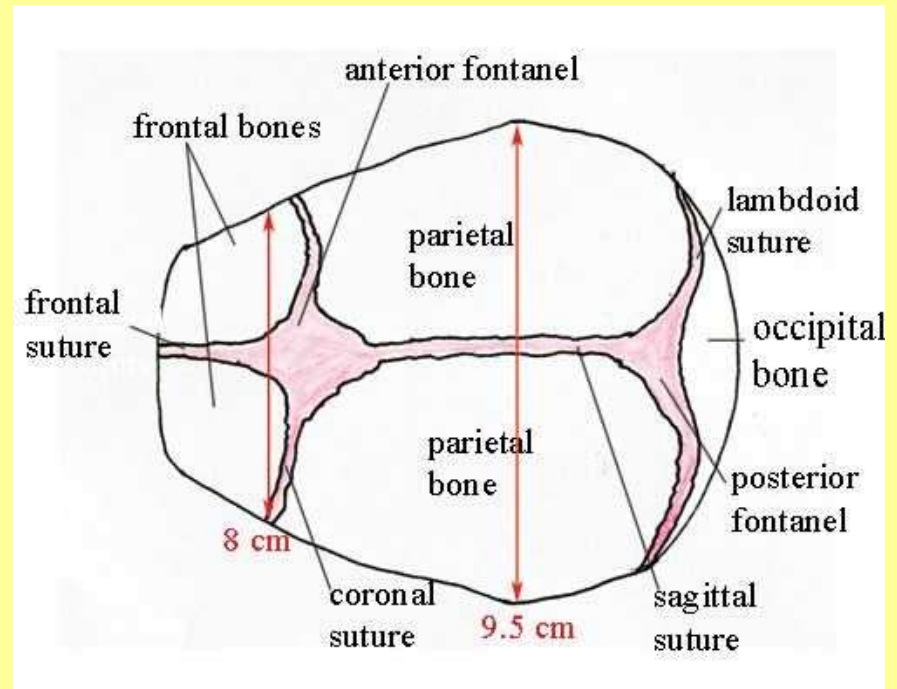


ASSESSMENT

1. Draw the diagram of the fetal skull and mention its parts ?
2. Define vertex?

- The fetal skull consist of 6 main bone which are mentioned below

- Frontal bones – 2
- Parietal bones – 2
- Temporal bones – 2
- Occipital bone – 1





SUTURES



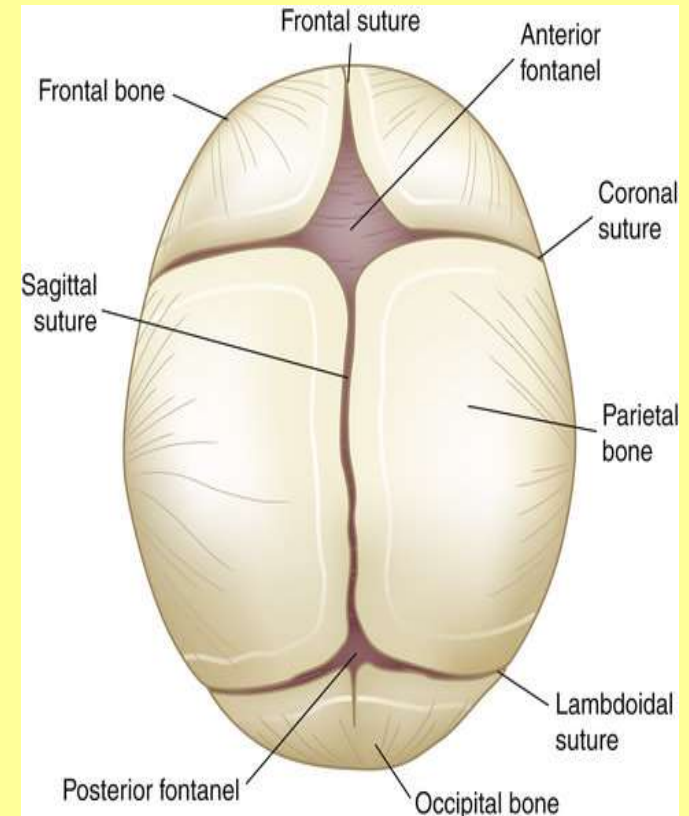
WHAT IS SUTURES?

Flat bones of the vault are united together by the non-ossified membranes attached to the margins of the bones.

These are called sutures.

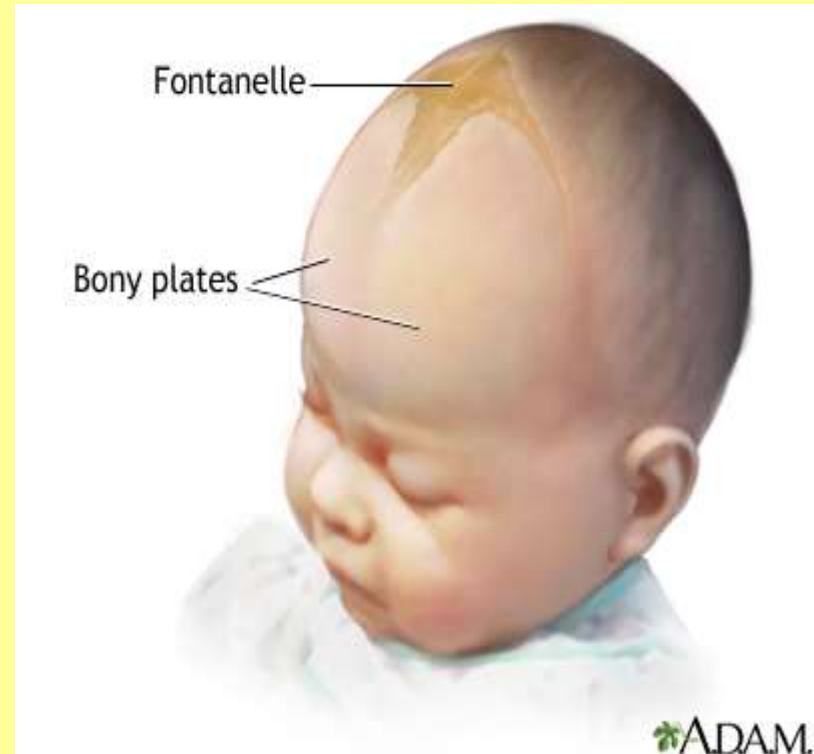
SUTURES

- **Sagittal suture:** lies between two parietal bones.
- **Coronal sutures :** Run between parietal and frontal bones on either sides.
- **frontal suture :** Lies between two frontal bones.
- **lambdoidal sutures :** Separate the occiput bone and two parietal bones



FONTANELLES

- ✓ **FONTANELLES????**
- ✓ Where two or more sutures adjoin, the fontanelle will be formed .
- ✓ There are two important fontanells .





ASSESSMENT

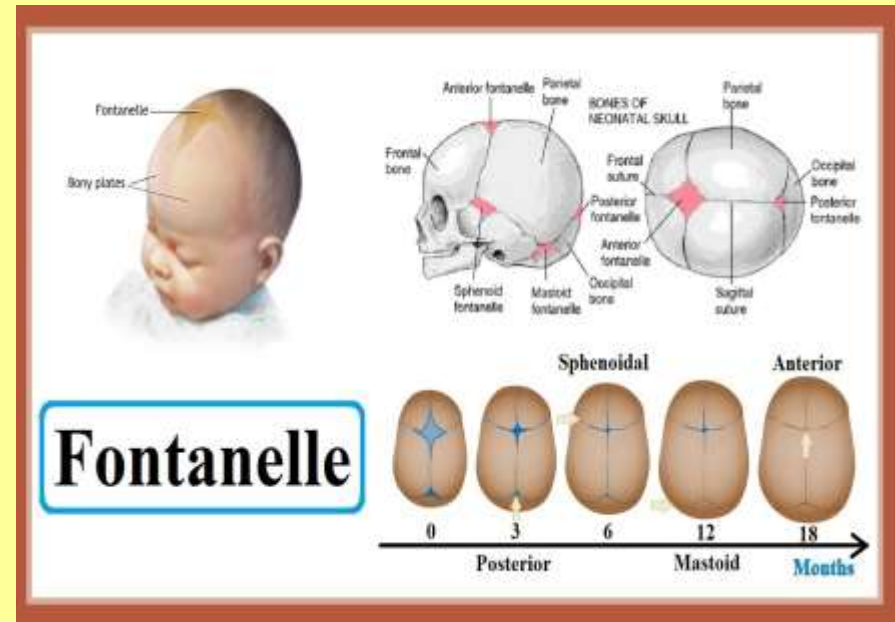


- 1. What is sutures?
- 2. Name the sutures of the fetal skull?
- 3. How sutures are different from fontanelles?

Anterior fontanelle

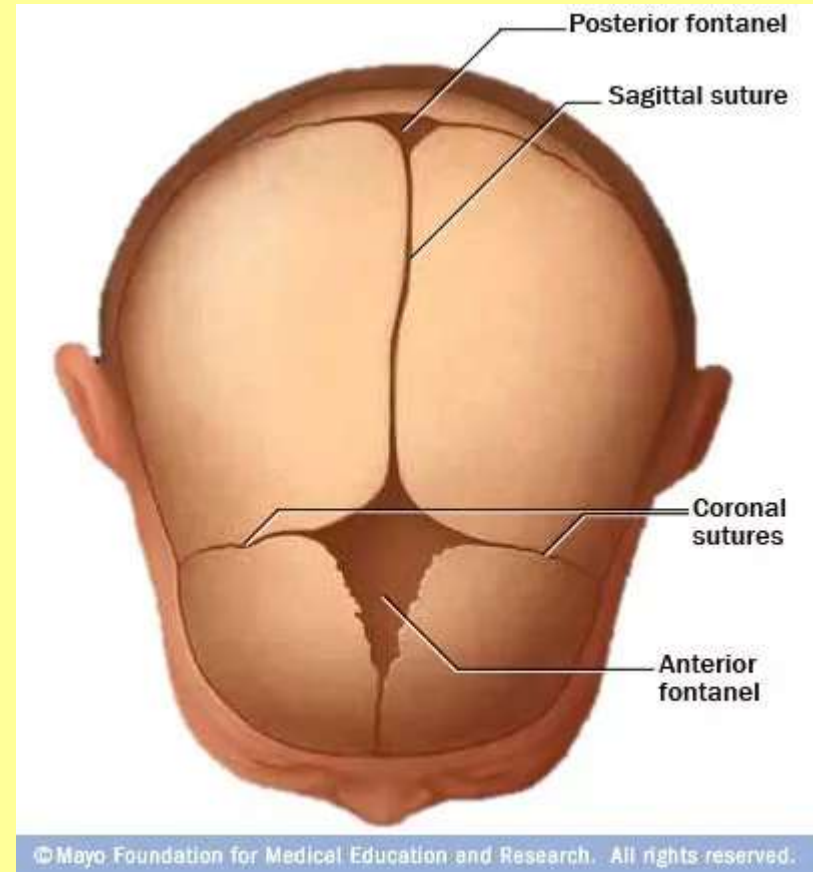
Anterior fontanelle :

- ❖ Formed by joining four sutures in midplane.
- ❖ Anteriorly frontal bone, posteriorly sagittal. On either side coronal suture.
- ❖ Diamond like shape.
- ❖ Ossified at 18months after birth.



FONTANELLES

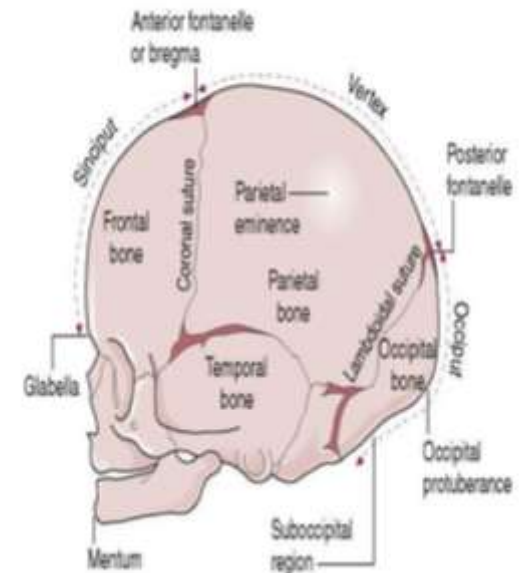
- ✓ **Posterior fontanelle :**
- ❖ Formed by junction of three sutures.
- ❖ Sagittal suture anteriorly & Lambdoidal suture on either side.
- ❖ Triangular in shape.
- ❖ Ossified at 1 and half months after birth.



LANDMARKS

- **Occiput**- is the occipital bone/external occipital protuberance.
- **Vertex**-Bounded between the Anterior fontanelle, posterior fontanelle and 2 parietal eminence.
- **Sinciput**- is the forehead region of fetal head.
- **Mentum**- it is the chin.

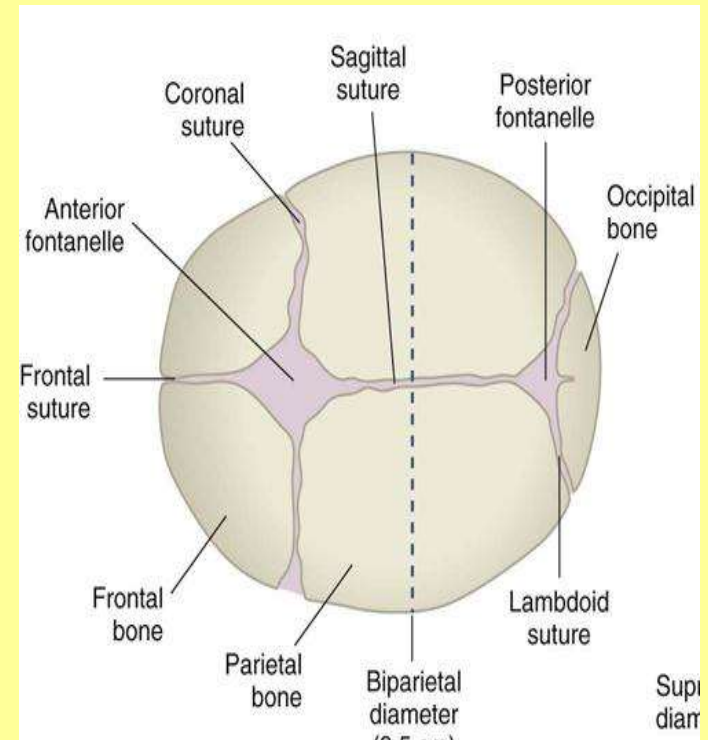
Fetal skull landmarks



DIAMETERS OF FOETAL SKULL

Transverse diameter

- Bi parietal Diameter: Measure about 9.5cm. It extends between two parietal eminences.
- Bi-temporal diameter: Measure about 8cm. It is the distance between antero-inferior ends of the coronal suture.





DIAMETERS OF FOETAL SKULL

Longitudinal diameter

- **Sub-occipitobregmatic** : 9.5cm. The diameter from below the occipital protuberance to the center of the anterior fontanelle.
- **Sub-occipitofrontal** : 10cm. The diameter from below the occipital protuberance to the center of the frontal suture.



DIAMETERS OF FOETAL SKULL

- **Occipitofrontal : 11.5cm.** The diameter from the occipital protuberance to the glabella.
- **Mentovertical : 13.5cm.** The diameter from the point of the chin to the highest point on the vertex, slightly nearer to the posterior than to the anterior fontanelle.



DIAMETERS OF FOETAL SKULL

- **Submentovertical : 11.5cm.** the diameter from the point where the chin joins the neck to the highest point where the chin joins the neck to the highest point on the vertex.
- **Submentobregmatic : 9.5cm.** The diameter from the point where the chin joins the neck to the center of bregma.



OBSTETRIAL IMPORTANCE



- Fetal skull molding is important for the adaptation of the head to the birth canal during vaginal delivery. Importantly, the fetal head must rotate around the maternal symphysis pubis.



REFERENCE





THANKYOU