I.2. Demonstration of ossification centres of foot & knee

Gross:

- Given specimen shows dissected left leg
- Presence of ossification centers in left lower end of femur, left upper end of tibia and left calcaneum, talus
- Age of the fetus can be calculated from these ossification centers.

Dissection of Foot:

- The foot is grasped in the left hand behind the heel, the toes pointing towards

the dissector.

- An incision is made between the interspace of third and fourth toes with a long knife, backwards through the sole of the foot and heel.
- If centre in calcaneum and talus are not exposed, thin slices of cartilage of these bones should be cut until the presence or absence has been shown.
- **Calcaneum appears at 5th** and in **talus at 7th month of intrauterine life.**
- A centre may be present in **cuboid at birth**, or it may appear shortly afterwards.

Dissection of Knee:

- The leg is flexed against the thigh and a transverse or vertical incision is made into the knee joint & the patella is removed.
- The end of the femur is pushed forward through the wound, and a number of parallel cross-sections are made through the epiphysis starting from its articular surface and continuing until the largest part of ossific centre is reached.
- The centre is seen as a **brownish-red nucleus surrounded by bluish white cartilage**.
- Further sections are made through plain cartilage above it until the diaphyseal centre is reached.
- The centre for **lower end of femur appears at 9th month of IUL.**
- In 80 percent of full-term infants, a centre is present in the **upper end of tibia**, but in other cases it **appears after birth.**

Calculation of age of foetus:

Rule of Haase

- The length of the foetus is measured from the crown to the heel in centimetres.
- During 1st 5 months of pregnancy the square root of the length gives the approximate age of the foetus in months, e.g., a foetus of 16 cm. is four months.

Haase's Modification of Morrisons's Law:

 During the last five months, the length in cm. divided by five gives the age in months, e.g., foetus of 35 cm. is 7 months.