

PLACENTA:

⇒ It is a fetomaternal organ, discoid, chorio-deciduate organ which connect the fetus with the uterine wall of the mother.

⇒ Two surface and two structural components.

SURFACES:

• MATERNAL SURFACE: It is rough, It present 15-30 polygonal area known as cotyledons.

• FETAL SURFACE: It is smooth and covered by Amnion. Umbilical cord is attached to the centre.

STRUCTURAL: / Development.

• MATERNAL: Decidua Basalis

• FETAL: Chorion frondosum.

⇒ normal attachment → upper uterine segment.

Development

⇒ chorion is the outermost layer of fetal membrane. It contain finger like projection called chorionic villi which invade into the maternal decidua from the Placenta.

⇒ After implantation, there are many spaces developing in the syncytiotrophoblast, known as lacunar space.

⇒ These space gradually get filled with maternal blood develop into extraembryonic mesoderm which coalesce to form extraembryonic coelom (chorionic cavity).

How these gaps of syncytiotrophoblast become trabeculae.

⇒ Toward the end of 2nd week some cells proliferate from the cytotrophoblast to the pharynx → This leads to 1° chorionic villi.

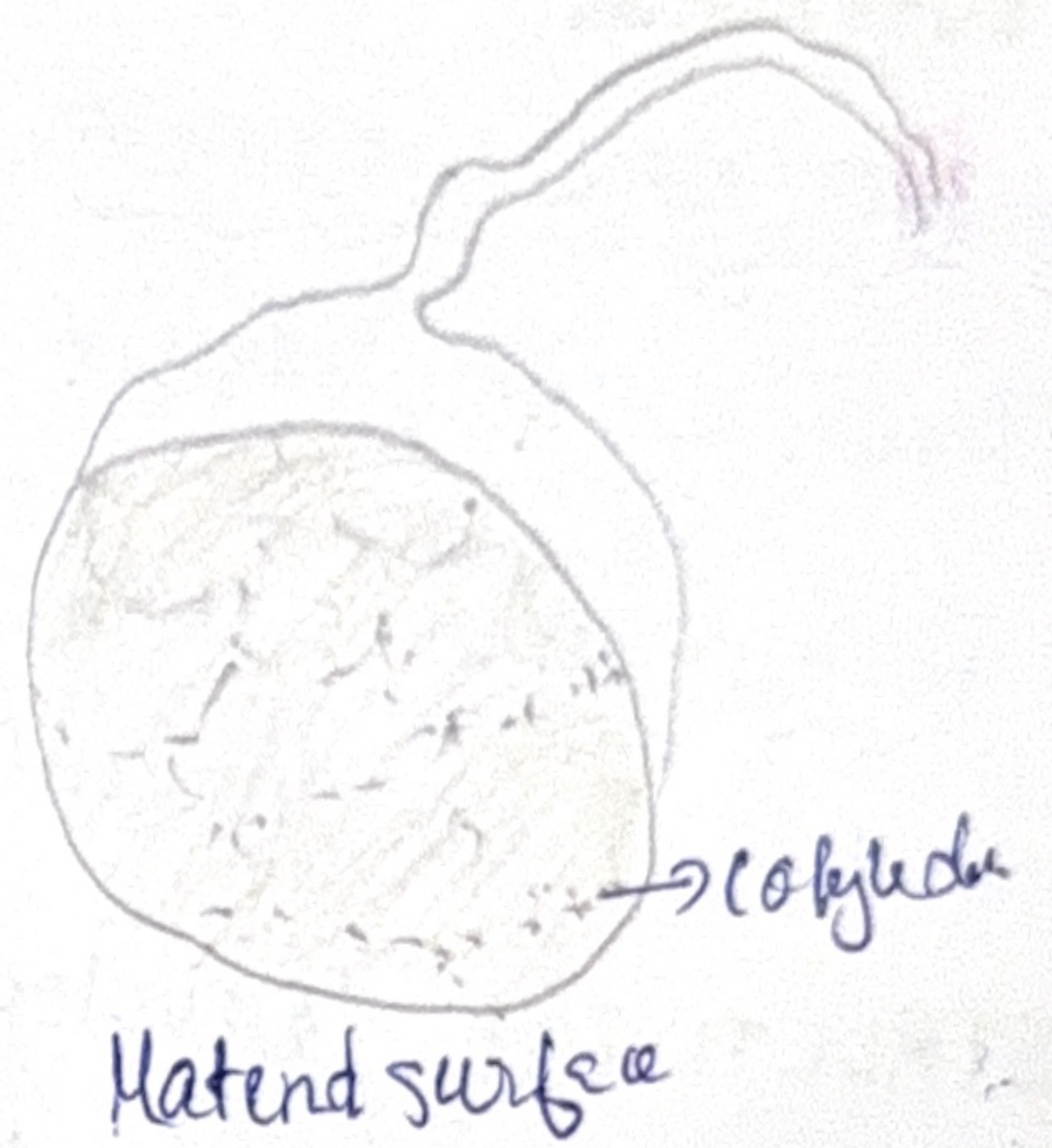
↳ space called intervillous space

- ⇒ The Amniotic cavity enlarges & chorionic cavity Reduces slowly
- During 3rd week the ECU penetrates into the cytotrophoblast ^{form} → 2nd CV
- ⇒ Later the chorionic cavity gets fully obliterated forming → 3rd CV.
- ⇒ The part of chorion which develops into placenta → Chorion frondosum
- ⇒ The remaining part which is around the Amniotic cavity → Chorion laeve

STRUCTURE OF PLACENTA:

Maternal Side: Basal Plate:

- ⇒ stratum spongiosum of decidua Basalis.
- ⇒ outer layer of syncytiotrophoblast.
- ⇒ outer shell of cytotrophoblast.
- ⇒ inner layer of syncytiotrophoblast.

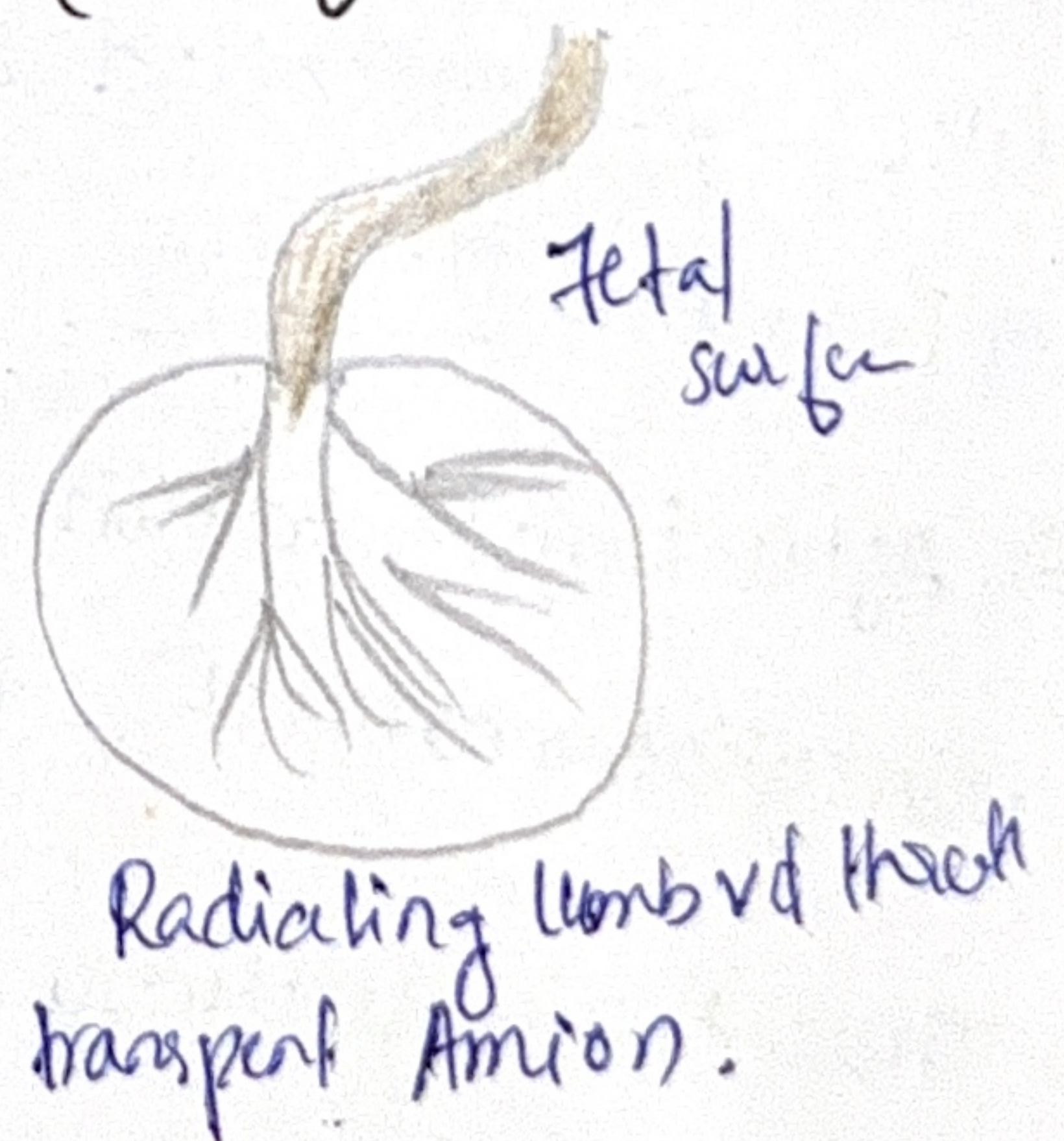
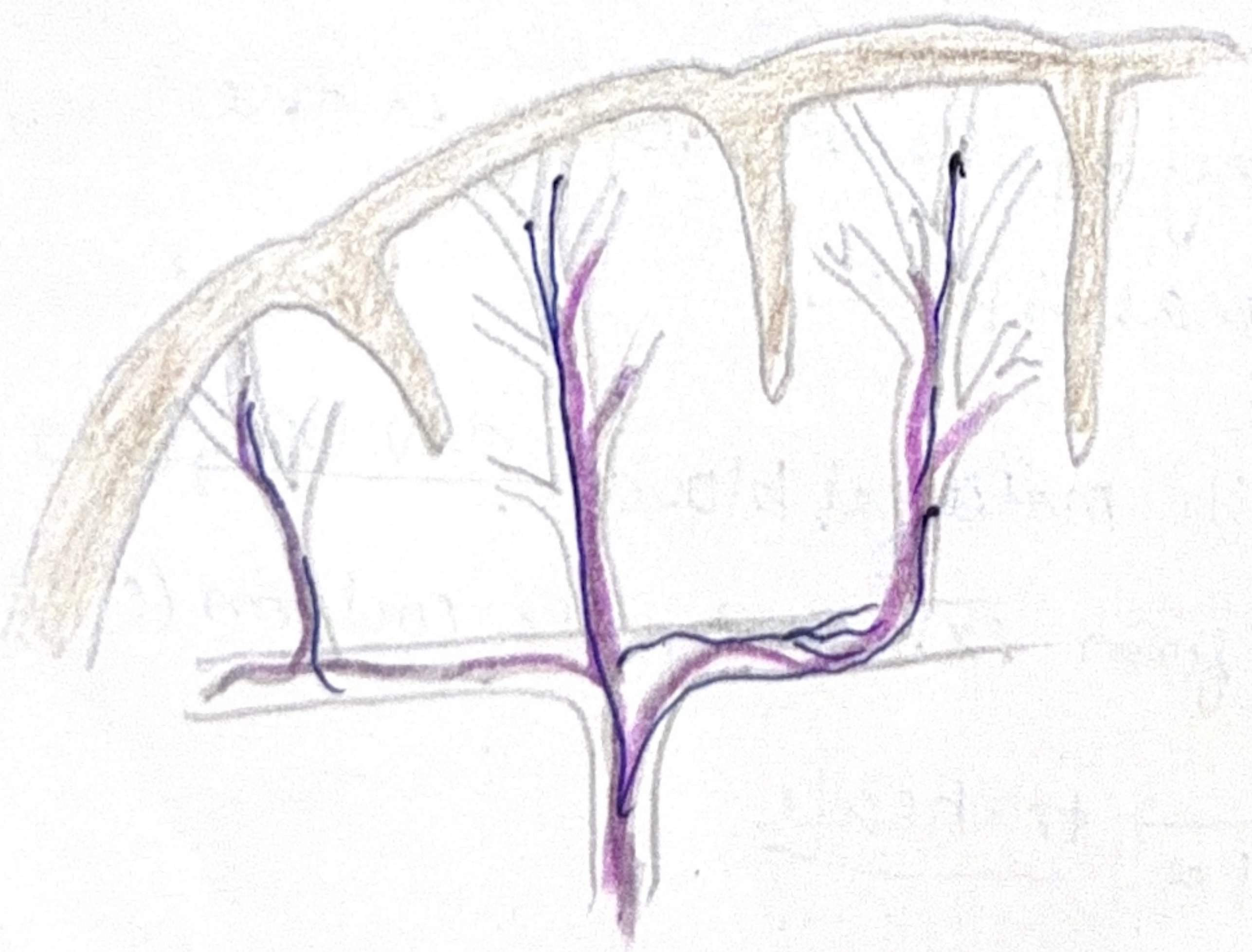


Fetal side: Chorionic Plate: covered by Amnion.

- ⇒ primary mesoderm
- ⇒ cytotrophoblast
- ⇒ syncytiotrophoblast.

Below basal & chorionic plate → stem villi present

- 1° (core of cytotrophoblast)
- 2° (core of primary mesoderm)
- 3° (core of fetal blood vessel).



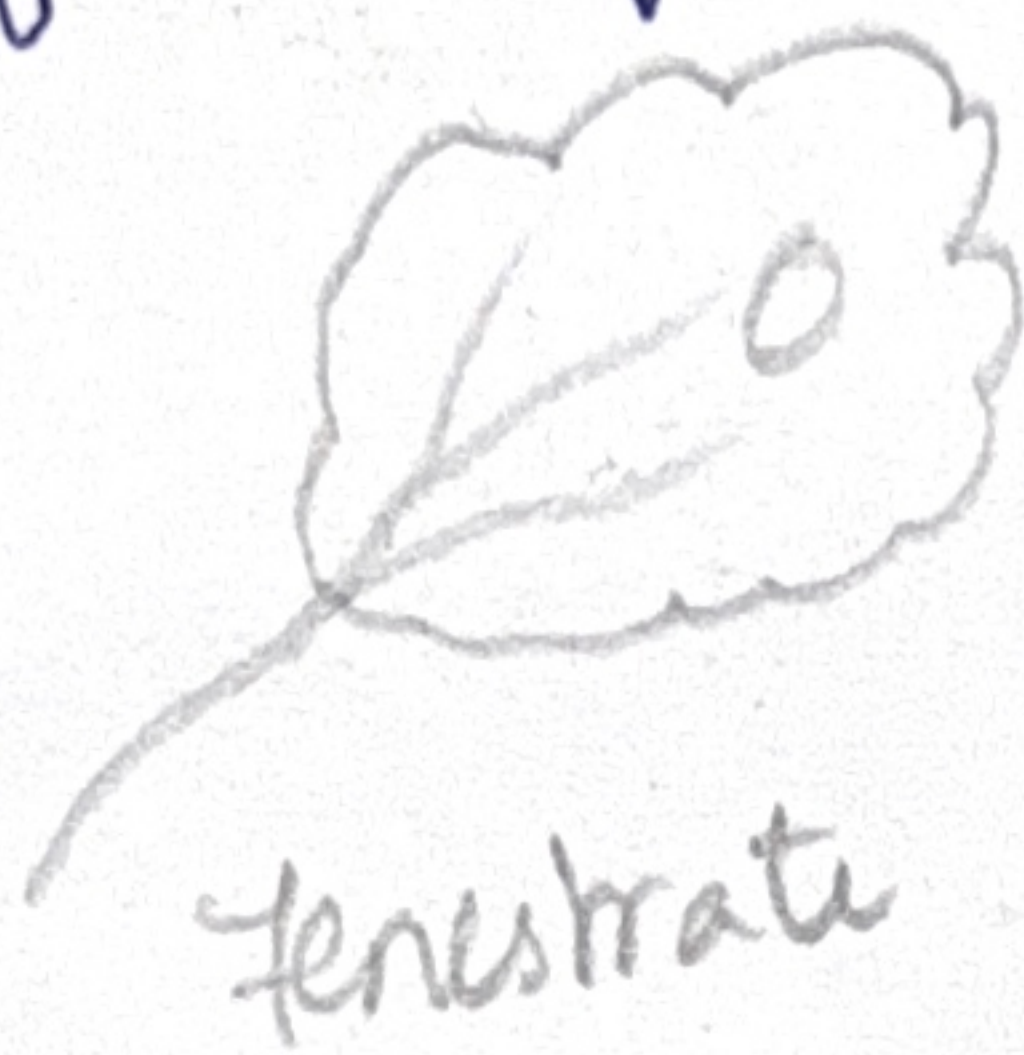
CLASSIFICATION OF PLACENTA

Anomalies in shape:

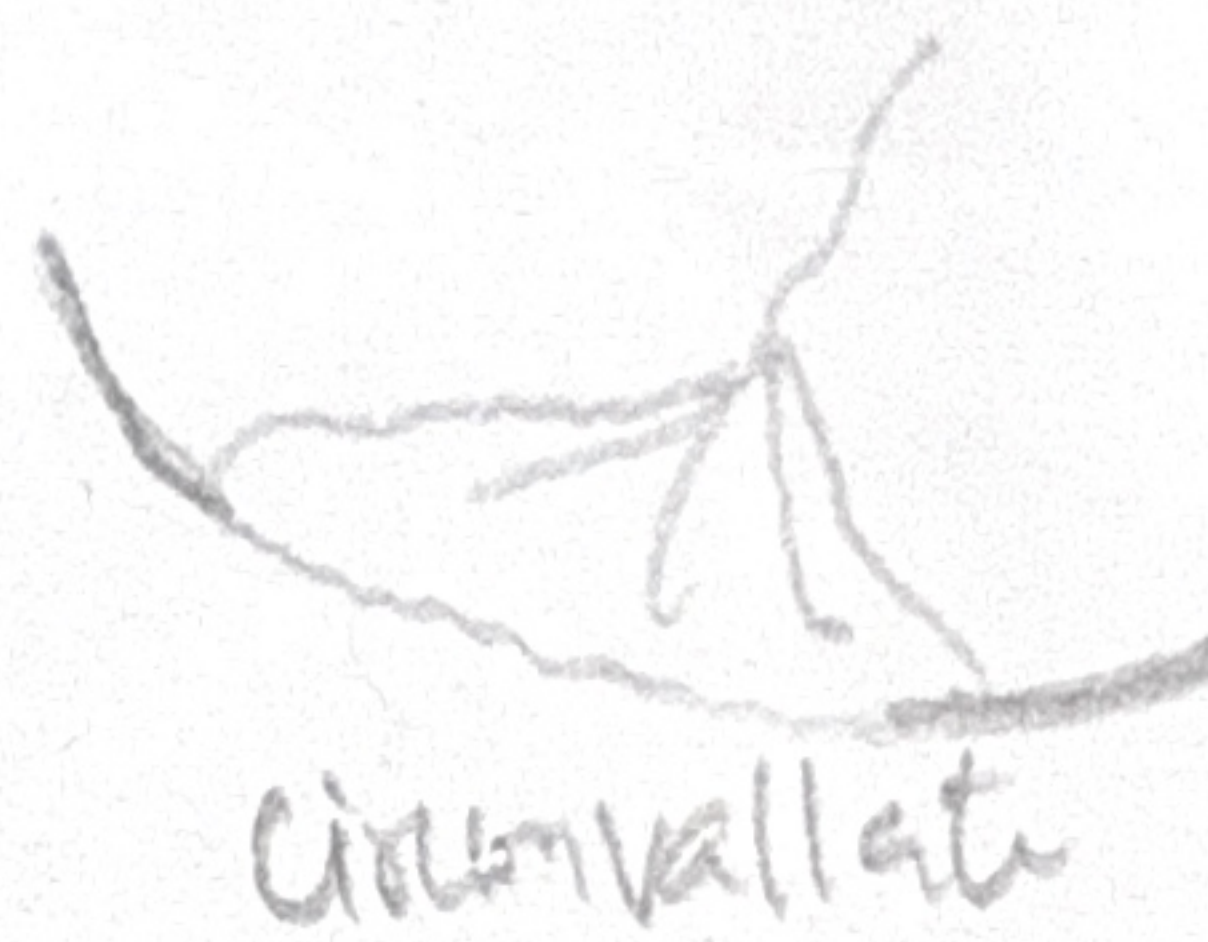
- 1) Bilobed or Helli lobed Placenta: The Placenta consist of two or more lobes.
- 2) Diffused Placenta: The Placenta is thin due to persistence of chorionic villi around the Blastocyst.
- 3) Placenta succenturiata: A small part of the placenta is sep from the main part but remain connect through fetal blood vessel & membrane.
- 4) Placenta fenestrata: A hole is present in the placenta.
- 5) Placenta circumvallate: The peripheral margin of the placenta is covered by trophoblastic folds of decidua.



Bilobed



Fenestrata



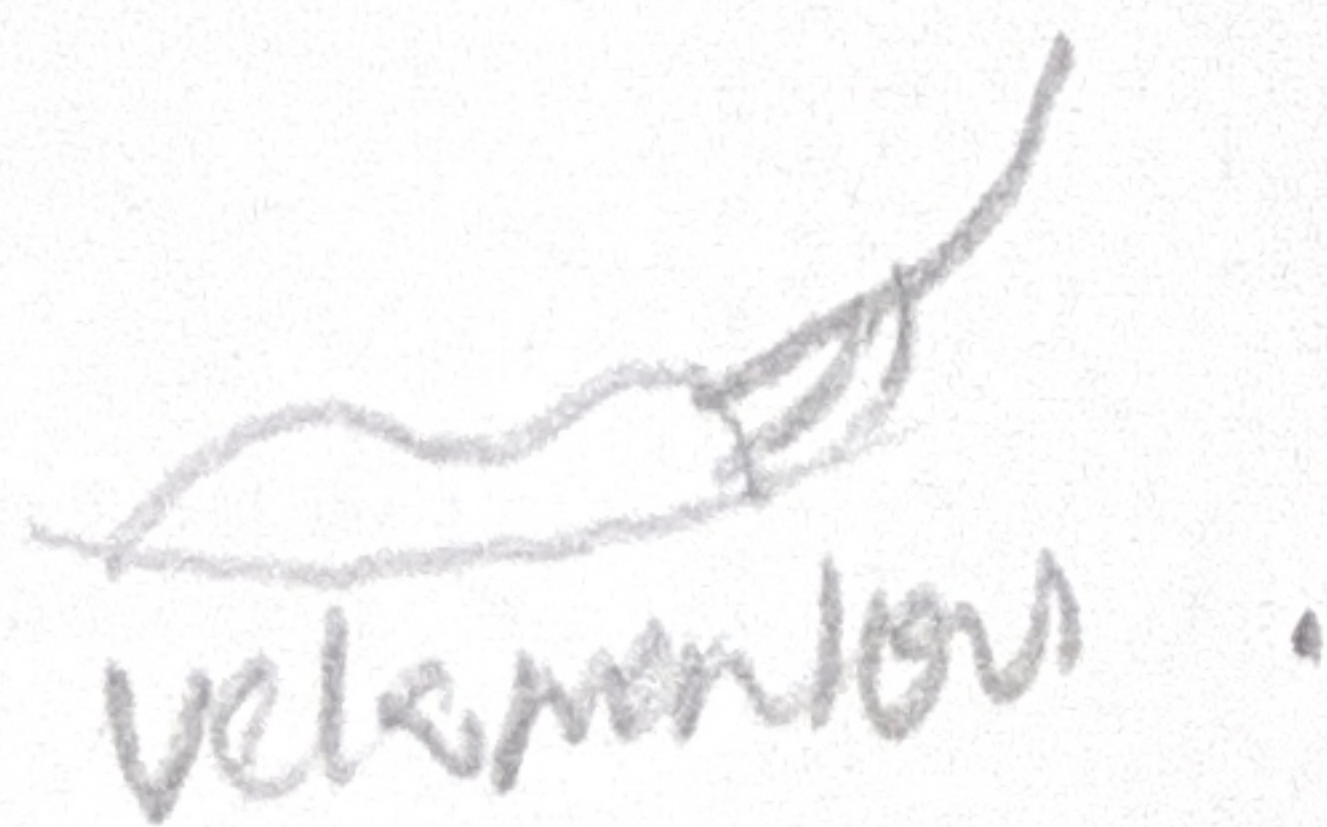
Circumvallate



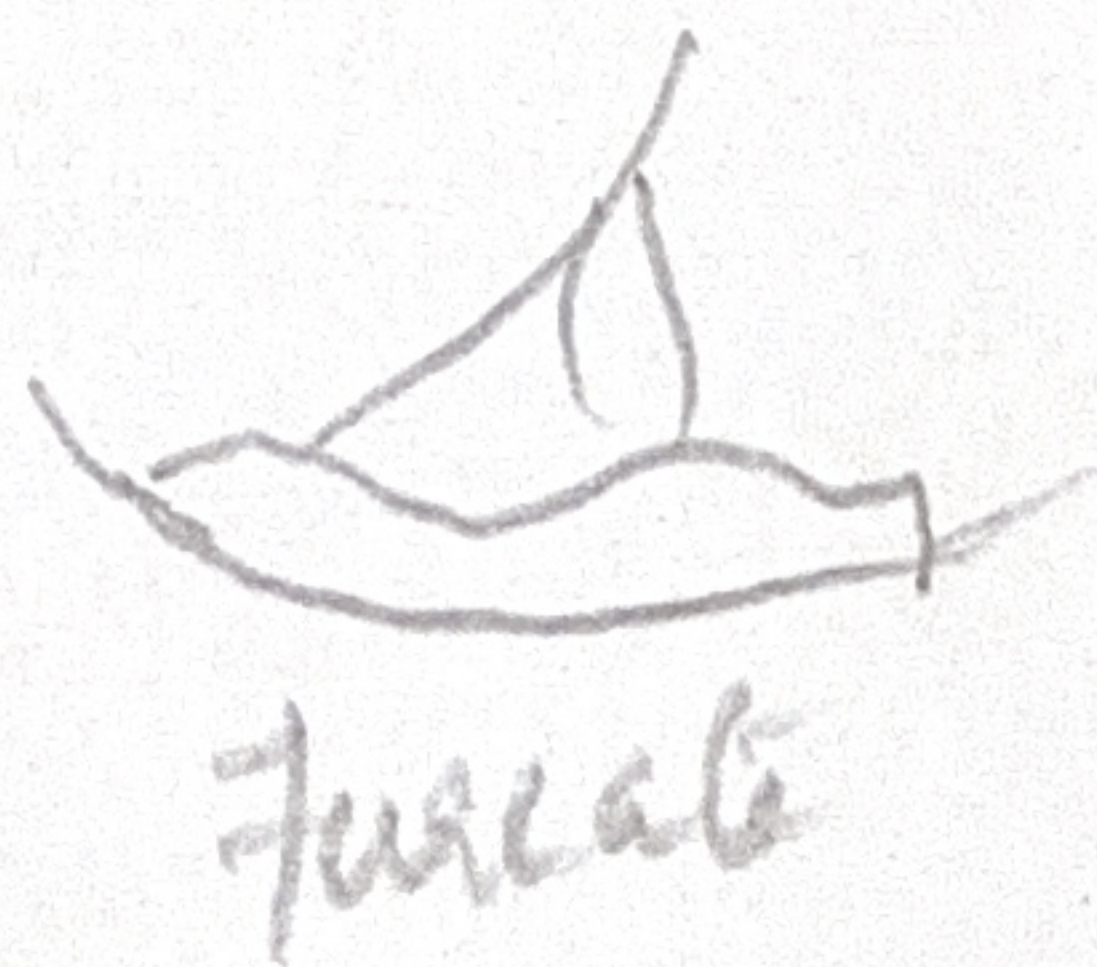
Succenturiata

Anomalies in Attachment of umbilical cord:

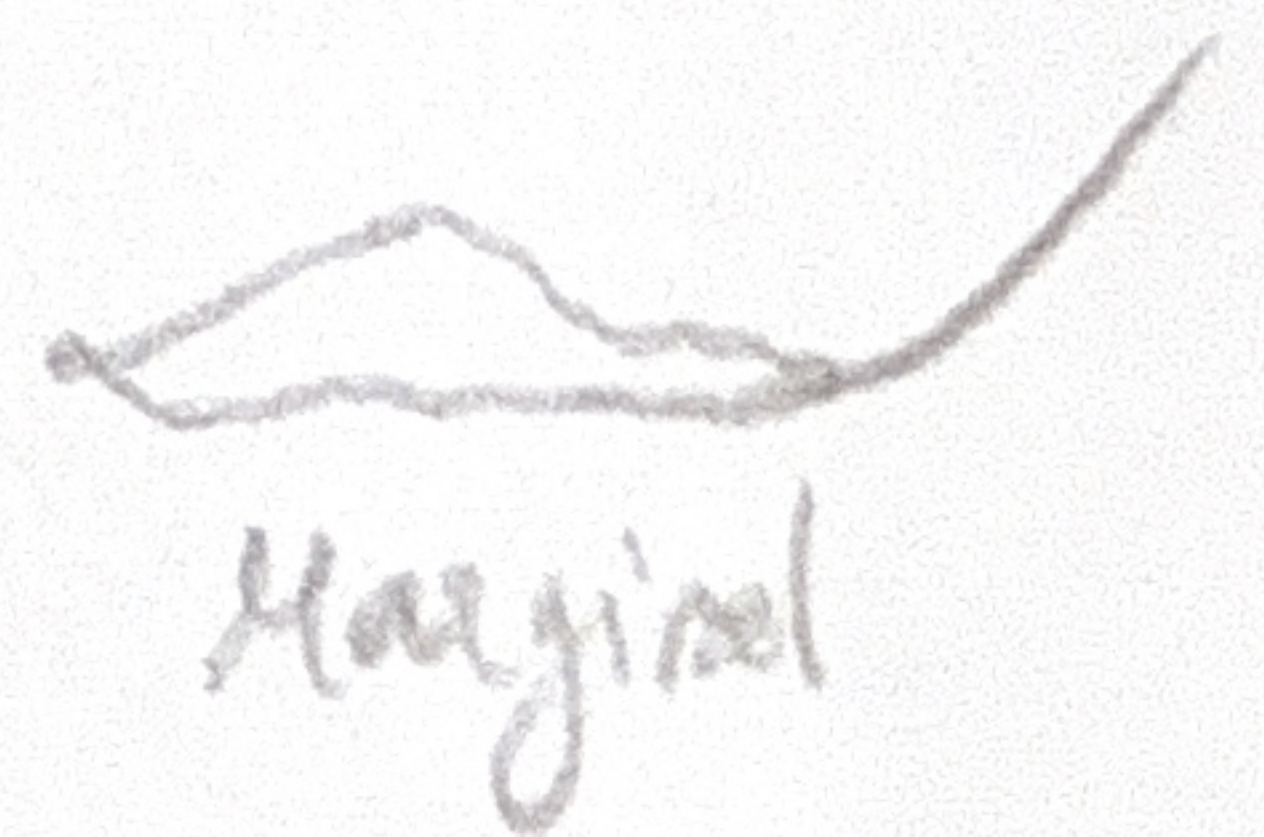
- 1) Marginal → attached to the Margin of Placenta.
- 2) Funicular Placenta: Blood vessel divide befor reaching the Placenta.
- 3) Velamentous Placenta: Umbilical cord is attached to fetal membrane.



Velamentous



Funicular



Marginal