

EROH VIVIAN OGHENERABOME

18/MHS01/150

DISCUSS THE SECOND WEEK OF DEVELOPMENT

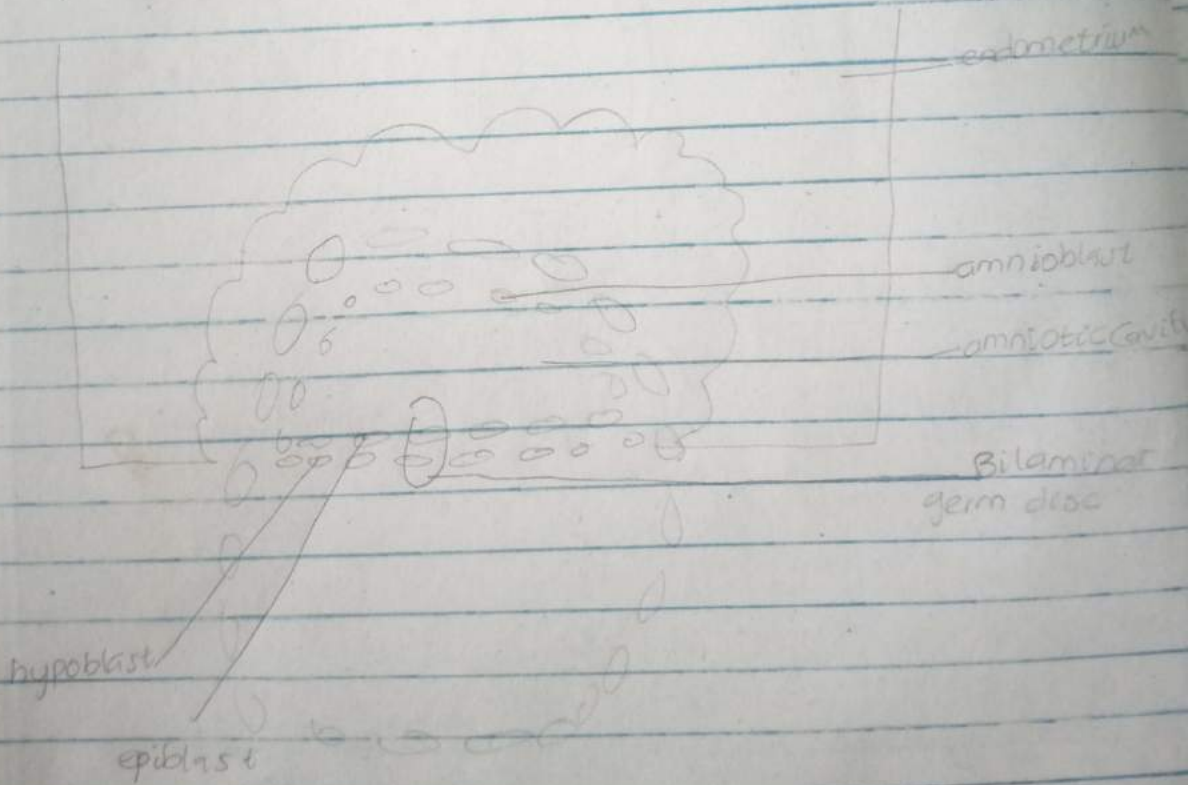
During the second week of development, 3 major events take place;

- I. Completion of implantation
- II. Formation of a bilaminar germ disc
- III. Development of extra embryonic structures

DAY 8

The Blastocyst is partially embedded in the endometrium. The syncytiotrophoblast continues to erode the endometrium. The cells of the cytotrophoblast continue to divide and migrate into the region of the Syncytiotrophoblast. The inner cell mass (Embryoblast) differentiate into cuboidal and columnar cells, Hypoblast and Epiblast respectively. The cells of the Epiblast that are adjacent to the syncytiotrophoblast are called amnioblast. This Amnioblast and the Epiblast surrounds the amniotic cavity. The epiblast and Amnioblast gives rise to the bilaminar germ disc

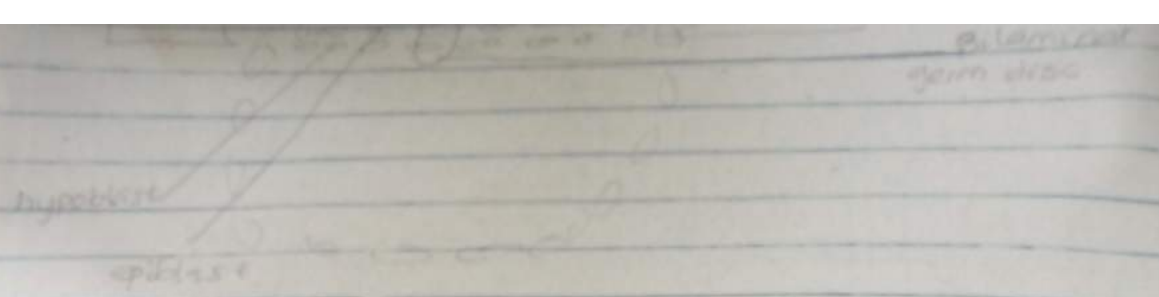
DAY 8



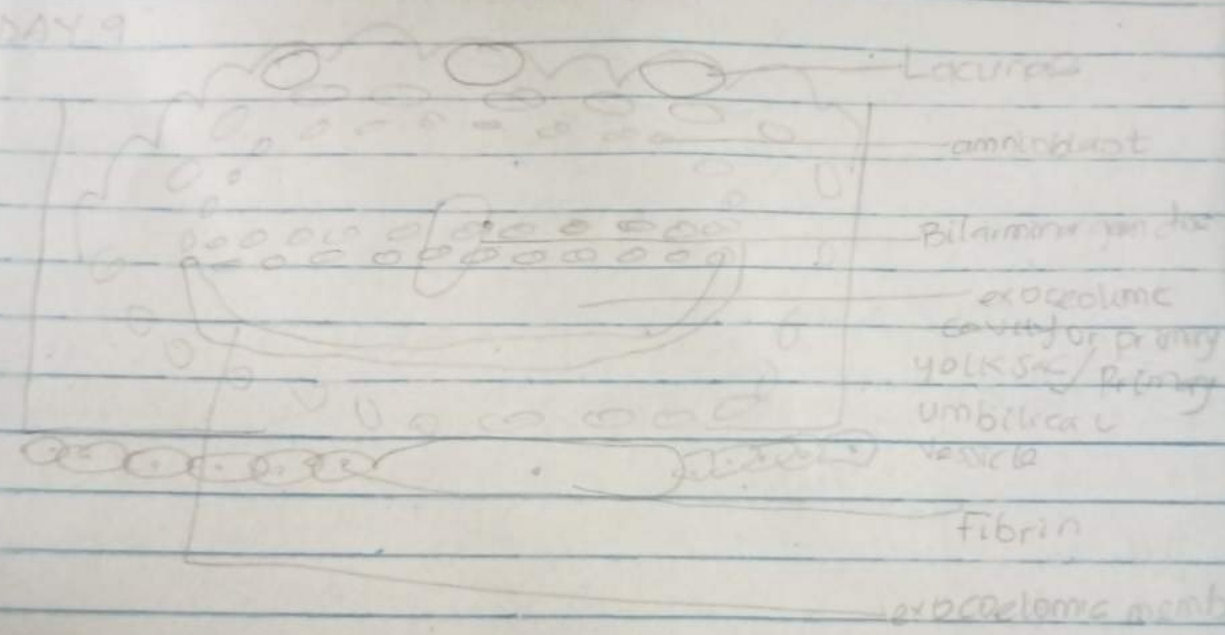
Bilaminar
germ disc

DAY 9

The Blastocyst is deeply embedded in the endometrium. Because it is deeply embedded, the surface epithelium is closed by the fibrin coagulum. Another membrane lies adjacent to the cytotrophoblast called Exocoelomic membrane/Heuser's membrane which surrounds the exocoelomic cavity/primary yolk sac/primary umbilical vesicle. Vacuoles develop in the syncytiotrophoblast which becomes larger with time and are called Lacunae.

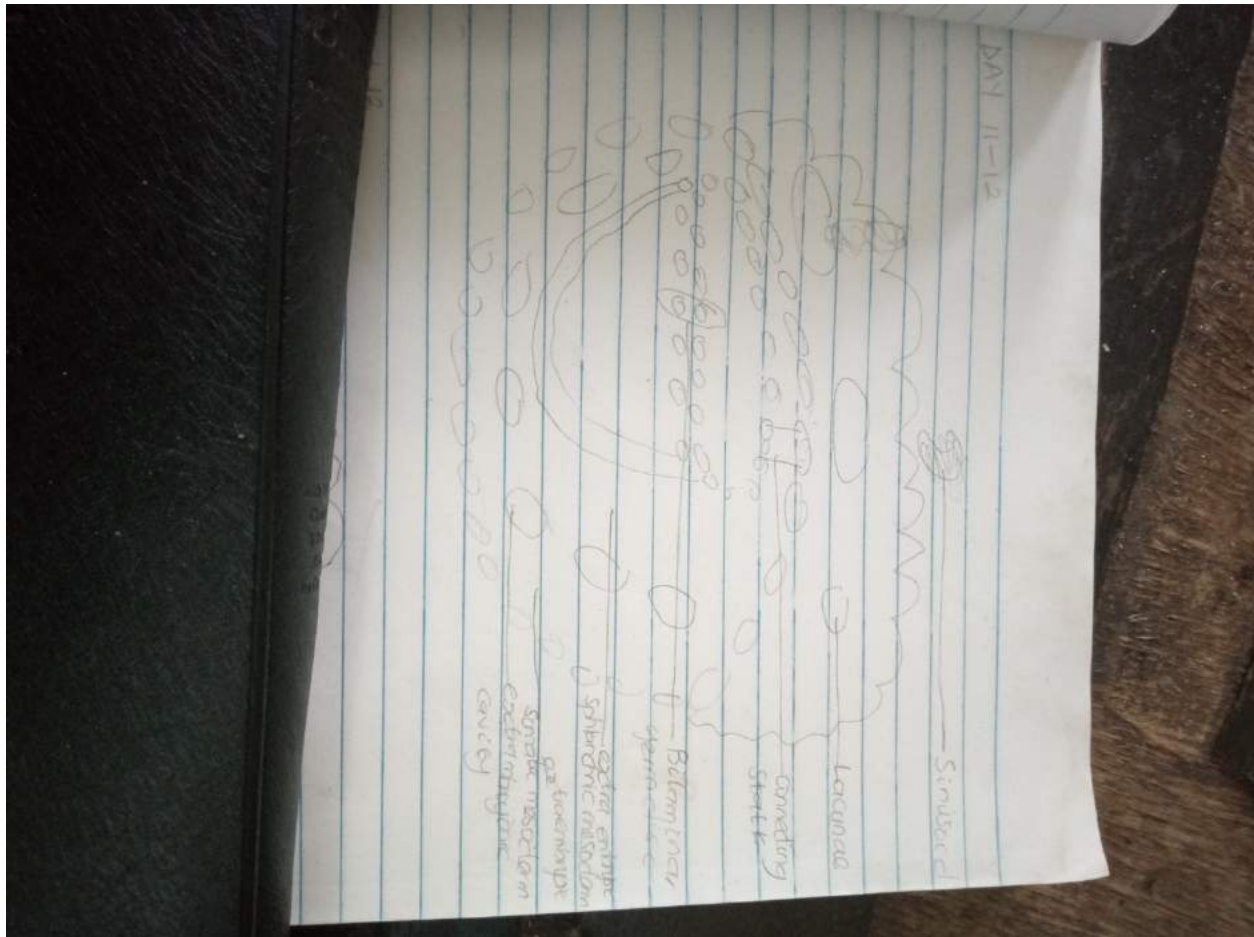


DAY 9



DAY 11-12

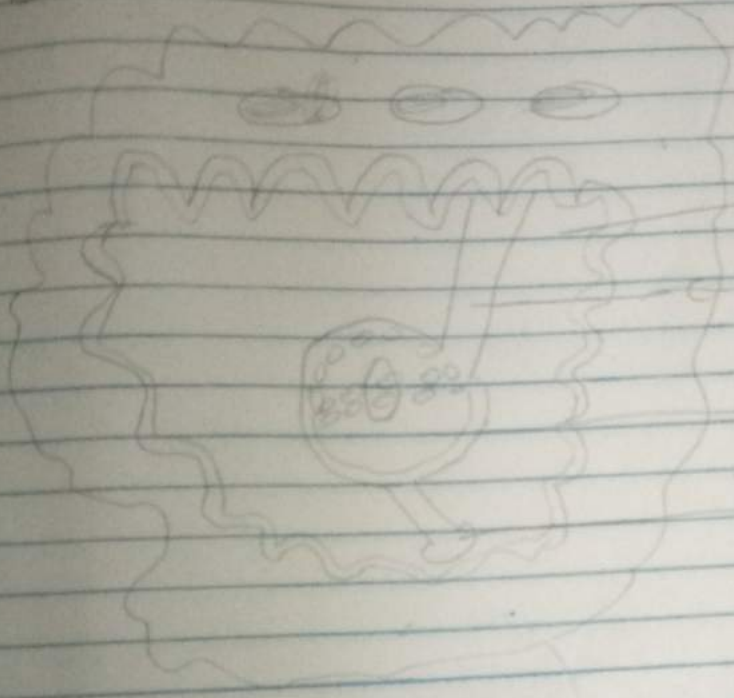
The Blastocyst is completely embedded in the endometrium. The blastocyst will continue to rupture capillaries in the endometrium which communicate with the lacunae which help to transfer blood from mother to child. A space of mesoderm develops between the Cytotrophoblast and exocoelomic membrane except the connecting stalk called the Extraembryonic mesoderm. Inside the embryonic mesoderm cavities develop called Extraembryonic cavity. This cavity divides the mesoderm into two parts . the part of the mesoderm that lines adjacent the region of the Cytotrophoblast is called the Extra embryonic somatic mesoderm. The other region that lines the exocoelomic membrane and amnioblast is called extra embryonic Splanchnic mesoderm. As development continues a reaction takes place called decidual reaction. During this transformation, the cell of the endometrium swells because of the accumulation of glycogen and lipid in their cytoplasm and they are known as decidual cells.



DAY13

The blastocyst acquires Syncytium to form the primary villi. The connecting stalk forms the future umbilical cord. The embryonic cavity becomes enlarge and give rise to chorion cavity

DAY 13



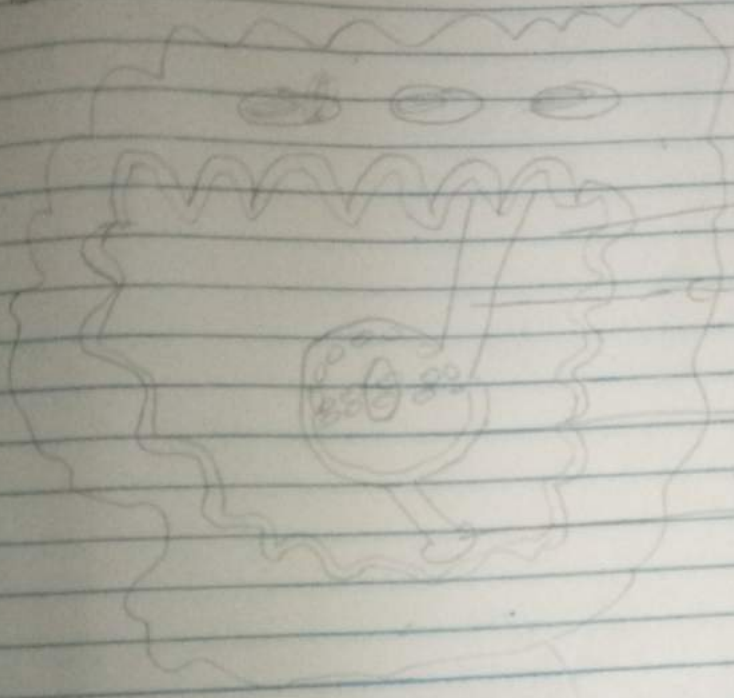
Chlorotic cavity

connecting stoma
(ambicoid cavity)

Secondary wall
S₂

exocellular space

DAY 13



Chlorotic cavity

connecting stipes
(amblyostome)

Secondary vac
sac

excretory pore