AGHEDO PEACE EGHOGHO

18/MHS01/037

MBBS

The second week of development is noted as the week of two’s. The blastocyst is completely embedded in the endometrium, the bilaminar disc is formed and other extraembryonic structures are formed.

Day 8

The blastocyst is partially embedded in the endometrium. The syncytiotrophoblast continues to erode \the endometrium and its tissues. The cytotrophoblast divides and move into the region of the syncytiotrophoblast. The inner cell mass of the embryoblast differentiates into the epiblast and the hypoblast. The epiblast is the upper layer of columnar cells and the hypoblasts are cuboidal. The epiblast cells found adjacent to the cytotrophoblast at the upper margin are referred to as the amnioblast. The amnioblast and the epiblast form the amniotic cavity. The epiblast and hypoblast form the bilaminar germ disc.

Day 9

The blastocyst is more deeply embedded in the endometrium and the defect on the surface epithelium of the endometrium is covered by fibrin coagulum. Vacuoles also begin to form in the region of the syncytiotrophoblast and they unite to form large lacruna’s. The hypoblast cells adjacent to the cytotrophoblast forms the exocoelomic membrane/ heuser’s membrane and together they form the boundaries of the exocoelomic cavity (primitive yolk sac/primary umbilical vesicle)

Day 11-12

Blastocyst is completely embedded in the endometrium. The endometrial defect has almost been fully covered by the surface epithelium, the syncytiotrophoblast penetrates deeper into the endometrium and erodes the endometrial capillaries which communicate with the lacruna system of the syncytiotrophoblast forming the primordial uteroplacental circulation allowing oxygen and nutrient to be available to the developing embryo. New cells also begin to appear between the outer cells of the exocoelomic cavity and inner cells of the cytotrophoblast; these cells are referred to as the extraembryonic mesoderm. Large cavities soon begin to form within the extraembryonic mesoderm except the region of the connecting stalk which divides the mesoderm into the extraembryonic splancic mesoderm and the extraembryonic somatic mesoderm. The cavity is referred to as the choronic cavity/extraembryonic cavity/extraembryonic coelom. Endometrial connective tissue cells undergo the decidual reaction allowing cells of the endometrium swell due to accumulation of glycogen and lipids in their cytoplasm.

Day 13

Surface defect has been completely covered by the surface epithelium. The cells of the cytotrophoblast penetrate into the syncytiotrophoblast, forming cellular columns lined by syncthium known as primary villi. The primary yolk sac reduces in size to become the secondary yolk sac which is smaller than the original exocoelomic cavity due to formation of the exocoelomic cyst which is pinched off from the primary yolk sac. It is found in the choronic cavity. The connecting stalk forms the future umbilical cord.