ETINOSA-OGBAHON OSASENAGA
18/MHS07/019
PHARMACOLOGY
PHS 212
Write a short note on IMPLANTATION

IMPLANTATION

Implantation is the process by which the fertilized ovum called zygote implants (fixes itself or gets attached) in the endometrial lining of uterus.

After the fertilization, the ovum is known as zygote. Zygote takes 3 to 5 days to reach the uterine cavity from fallopian tube. While traveling through the fallopian tube, the zygote receives its nutrition from the secretions of fallopian tube.

After reaching the uterus, the developing zygote remains freely in the uterine cavity for 2 to 4 days before it is implanted. Thus, it takes about 1 week for implantation after the day of fertilization. During the stay in uterine cavity before implantation, the zygote receives its nutrition from the secretions of endometrium, which is known as uterine milk.

Just before implantation, the zygote develops into morula and then the implantation starts. A layer of spherical cells called trophoblast cells is formed around morula. Trophoblast cells release proteolytic enzymes over the surface of endometrium. These enzymes digest the cells of the endometrium. Now, morula moves through the digested part of endometrium and implant.

Once the embryo reaches the blastocyst stage (approximately five to six days after fertilization), it hatches out of its zona pellucida (shell) and begins the process of implantation. In nature, 50% of all fertilized eggs are lost before a woman's missed menses. So, too, in the in vitro fertilization (IVF) process an embryo may begin to develop but not make it to the blastocyst stage (the first stage where those cells destined to become the fetus separate from those which will become the placenta). The blastocyst may implant but not grow or the blastocyst may grow and still cease development before the two week time at which a pregnancy can be detected. The receptivity of the uterus and the health of the embryo are important for the implantation process.