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LVL: 300 (CO)

COURSE CODE:

ASSIGNMENT: DISCUSS LACTATION AND GESTATION PERIOD IN A NORMAL FEMALE.

**Overview of lactation**.

Lactation describes the secretion of milk from the mammary glands on the period of time that a mother lactates to feed her young. The process occurs in all female mammals, although it predates the origin of mammals.

In humans the process of feeding milk is called breastfeeding or nursing.

The chief function of lactation is to provide nutrition and immune protection to the young after birth. In almost all mammals, lactation induces a period of infertility, which serves to provide the optimal birth spacing for survival of the offspring.

In most species milk comes out from the mothers nipples; however, the platypus (a non-placental mammal) releases milk through ducts in its abdomen. In only one species of mammal, the dayak fruit bat, is milk production a normal male function.

In some other mammals, the male may produce milk as the result of a hormonal imbalance. This phenomenon may also be observed in newborn infants as well (for instance witch’s milk).

Galactopoiesis is the maintenance of milk production. This stage requires prolactin and oxytocin.

**Preparation for lactation**

By the 5th or 6th month of pregnancy, the breasts are ready to produce milk. During the latter part of pregnancy, the woman’s breasts enter into the lactogenesis 1 stage. This is when the breasts make colostrums, a thick, sometimes yellowish fluid.

At this stage, high levels of progesterone inhibit most milk production. It is not a medical concern if a pregnant woman leaks any colostrum before her baby’s birth, nor is it an indication of future milk production.

At birth, prolactin levels remain high, while the delivery of the placenta results in a sudden drop in progesterone, estrogen, and human placental lactogen levels. This abrupt withdrawal of progesterone in the presence of high prolactin levels stimulates the copious milk production of the lactogenesis ii stage.

When the breast is stimulated, prolactin levels in the blood rise and peak in about 45mins, then return to the pre-breastfeeding stage about three hours later. The release of prrolactin triggers the cells in the alveoli to make milk.

**Colostrum**

Colostrum is the first milk a breastfed baby receives. It contains higher amount of white blood cells and antibodies than mature milk, and is especially high in immunoglobulin A (IgA), which coats the lining of the baby’s immature intestines, and helps to prevent pathogens from invading the baby’s system. Secretory IgA also helps prevent food allergies. Over the first two weeks after the birth, colostrum production slowly gives way to mature breast milk.

**Gestation in female**

Gestation is the period of development during the carrying of an embryo or fetus inside viviparous animals. It is typical for mammals, but also occurs for some non-mammals. Mammals during pregnancy can have one or more gestations at the same time, for example in multiple birth.

The time interval of a gestation is called the gestation period. In human obstetrics, gestational age refers to the fertilization age plus two weeks. This is approximately the duration since the womans last menstrual period (LMP) began.

In mammals, pregnancy begins when a zygote (fertilized ovum) implants in the females uterus and ends once the fetus leaves the uterus.

Human pregnancies can be divided into 3 trimesters, each approximately three months long. The first trimester is from the last period through the 13th week, the second trimester is 14th- 27th week, and the third trimester is 28th-42nd week. Birth normally occurs at a gestational age of about 40 weeks, though it is common for births to occur from 37th to 42nd weeks. From the 9th week of pregnancy (11th week of gestational age), the embryo is called a fetus.

Various factors can come into play in determining the duration of gestation. For humans, male fetuses normally gestate several days longer than females and multiple pregnancies gestate for a shorter period.