Physiology

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Matric number:18/ mhs02/097

Discuss the cyclic changes in the vagina
Answer:
The most striking **changes in the vagina**, is the marked basal cell proliferation and thickening of the stratum granulosum during the follicular phase of the menstrual cycle. The histological **changes** observed in the **vagina** demonstrated a good correlation with the observation on cytological examination of the smears. During the menstrual cycle definite proliferative and destructive changes occur in the human vaginal epithelium. In the first days after the beginning of the last menstrual period a division of the vaginal

epithelium into three layers is noticeable. This is more strikingly marked during the premenstrual period. Through the early appearance of an intra-epithelial zone of cornification. the human vaginal epithelium may be divided into a functionalis, the layer of regeneration and change,

Cyclic changes in the breast Answers:

Each month, women go through changes in the hormones that make up the normal menstrual cycle. The hormone estrogen is produced by the ovaries in the first half of the menstrual cycle. It stimulates the growth of milk ducts in the breasts. The increasing level of estrogen leads to ovulation halfway through the cycle. Next, the

hormone progesterone takes over in the second half of the cycle. It stimulates the formation of the milk glands. These hormones are believed to be responsible for the **cyclical changes** that many women feel in their **breasts** just before menstruation. These include swelling, pain, and soreness. During menstruation, many women also have **changes** in **breast** texture. Their **breasts** may feel very lumpy. This is because the glands in the breast are enlarging to get ready for a possible pregnancy. If pregnancy does not happen, the breasts go back to normal size. Once menstruation starts, the cycle begins again.

2. Hormonal regulation of the menstrual cycle

Answers:

The **menstrual cycle** is regulated by **hormones**. Luteinizing **hormone** and follicle-stimulating **hormone**, which are produced by the pituitary gland, promote ovulation and stimulate the ovaries to produce estrogen and progesterone. The cyclic events in the ovary depend on gonadotropic hormones secreted by the anterior lobe of the pituitary gland; this gland is situated in a small recess at the base of the skull. There are two, and possibly three, gonadotropic hormones: follicle stimulating hormone (FSH), luteinizing hormone (LH) and, possibly,leutotropic hormone(LTH)
FSH is secreted in greatest

amount in the first half of the menstrual cycle, and LH has its peak of secretion at mid-cycle. It is believed that the sequential action of FSH and LH causes ripening of the follicle and ovulation. In some animals LTH is necessary for maintenance of the corpus luteum, but in women under treatment for infertility ovulation has been successfully induced with FSH and LH alone. Multiple births, as the result of multiple ovulation, have occurred after excessive doses of FSH have been given.