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PHYSIOLOGY 212

NURSING

ASSIGNMENT

BRIEFLY DISCUSS THE CYLIC CHANGE IN THE BREAST AND VAGINA

BREAST.

Breast can be defined as either of the two soft, protruding organs on the upper front of a woman's body which secrete milk after childbirth.

Breasts grow in response to the hormones estrogen and progesterone. As you enter puberty, levels of these hormones increase. Your breasts begin to grow under the stimulation of these hormones. Hormone levels also change during the menstrual cycle, pregnancy, breastfeeding, and menopause.

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.

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VAGINA.

The cytological examination of the vaginal smears showed that the superficial cells increased in number towards the middle of the cycle and the number of intermediate cells declined gradually. Parabasal cells were observed mainly at the beginning of the cycle; they disappeared towards the middle of the menstrual cycle. During the early follicular phase, the cells were moderately separated from each other, and during the second half of the proliferative or follicular phase, the superficial cells appeared clumped together. Leucocytes were usually absent except for at the beginning of the cycle and in the last few days of the late secretory or luteal phase. The maturation index of the vaginal smears can be considered as a tool for distinguishing the different phases of the menstrual cycle. The microscopic examination of the genital organs showed that during the proliferative or follicular phase of the cycle, which corresponds to the development of the ovarian follicles, the uterus showed growth of endometrial glands, stroma and endothelial cell proliferation with capillary sprouts. Shortly after ovulation and parallel to the formation of the corpora lutea, the endometrium enters the secretory or luteal phase, which is characterized by coiling of endometrial glands, glandular secretion and the differentiation of the spiral artery. 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. The present study demonstrated that the process of angiogenesis in the uterus during the different phases of the menstrual cycle is a multiple phenomenon involving proliferation, maturation and differentiation.

EXPLAIN MENSTRUAL CYCLE.

What is menstrual cycle?

It can be defined as a cycle is counted from the first day of 1 period to the first day of the next period. The average menstrual cycle is 28 days long. Cycles can range anywhere from 21 to 35 days in adults and from 21 to 45 days in young teens. The rise and fall of levels of hormones during the month control the menstrual cycle.

The menstrual cycle is complex and is controlled by many different glands and the hormones that these glands produce. A brain structure called the hypothalamus causes the nearby pituitary gland to produce certain hormones , which prompt the ovaries to produce the sex hormones estrogen and progesterone.

The menstrual cycle is a biofeedback system, which means each structure and gland is affected by the activity of the others.

PHASES OF MENSTRUATION

1.menstruation

2.the follicular phase

3.ovulation

4.the luteal phase

WHAT IS MENSTRUATION?

Menstruation is the elimination of the thickened lining of the uterus (endometrium) from the body through the vagina. Menstrual fluid contains blood, cells from the lining of the uterus (endometrial cells) and mucus. The average length of a period is between three days and one week.

Sanitary pads or tampons are used to absorb the menstrual flow. Both pads and tampons need to be changed regularly (at least every four hours). Using tampons has been associated with an increased risk of a rare illness called toxic shock syndrome (TSS).

THE FOLLICULAR PHASE.

The follicular phase starts on the first day of menstruation and ends with ovulation. Prompted by the hypothalamus, the pituitary gland releases follicle stimulating hormone (FSH). This hormone stimulates the ovary to produce around five to 20 follicles (tiny nodules or cysts), which bead on the surface.

Each follicle houses an immature egg. Usually, only one follicle will mature into an egg, while the others die. This can occur around day 10 of a 28-day cycle. The growth of the follicles stimulates the lining of the uterus to thicken in preparation for possible pregnancy

OVULATION.

Ovulation is the release of a mature egg from the surface of the ovary. This usually occurs mid-cycle, around two weeks or so before menstruation starts.

During the follicular phase, the developing follicle causes a rise in the level of estrogen. The hypothalamus in the brain recognizes these rising levels and releases a chemical called gonadotrophin-releasing hormone (GnRH). This hormone prompts the pituitary gland to produce raised levels of luteinizing hormone (LH) and FSH.

Within two days, ovulation is triggered by the high levels of LH. The egg is funneled into the fallopian tube and toward the uterus by waves of small, hair-like projections. The life span of the typical egg is only around 24 hours. Unless it meets a sperm during this time, it will die.

When you want to have a baby you can improve your chance of getting pregnant if you know about ovulation and the ‘fertile window’ in the menstrual cycle.

LUTEAL PHSE.

During ovulation, the egg bursts from its follicle, but the ruptured follicle stays on the surface of the ovary. For the next two weeks or so, the follicle transforms into a structure known as the corpus luteum. This structure starts releasing progesterone, along with small amounts of estrogen. This combination of hormones maintains the thickened lining of the uterus, waiting for a fertilized egg to stick (implant).

If a fertilized egg implants in the lining of the uterus, it produces the hormones that are necessary to maintain the corpus luteum. This includes human chorionic gonadotrophin (HCG), the hormone that is detected in a urine test for pregnancy. The corpus luteum keeps producing the raised levels of progesterone that are needed to maintain the thickened lining of the uterus.

If pregnancy does not occur, the corpus luteum withers and dies, usually around day 22 in a 28-day cycle. The drop in progesterone levels causes the lining of the uterus to fall away. This is known as menstruation. The cycle then repeats.

Some of the more common menstrual problems include:

premenstrual syndrome (PMS) – hormonal events before a period can trigger a range of side effects in women at risk, including fluid retention, headaches, fatigue and irritability. Treatment options include exercise and dietary changes

dysmenorrhoea – or painful periods. It is thought that the uterus is prompted by certain hormones to squeeze harder than necessary to dislodge its lining. Treatment options include pain-relieving medication and the oral contraceptive pill

heavy menstrual bleeding (previously known as menorrhagia) – if left untreated, this can cause anaemia. Treatment options include oral contraceptives and a hormonal intrauterine device (IUD) to regulate the flow.

Amenorrhoea – or absence of menstrual periods. This is considered abnormal, except during pre-puberty, pregnancy, lactation and post menopause. Possible causes include low or high body weight and excessive exercise.

Menorrhagia. Also known as heavy bleeding : if left untreated, this can cause anaemia. Treatment options include oral contraceptives and a hormonal intrauterine device (IUD) to regulate the flow

SIGNS AND SYMPTOMS OF ABNORMAL MENSTRUATION .

1. Bleeding for more than seven days
2. Unbearable pain
3. When your cycle is more than 35 days
4. Excessive bleeding
5. Nausea/vomiting
6. Chronic pelvic pain

CAUSED OF ABNORMAL MENSTRUATION

1. Drugs
2. Smoking
3. Stress
4. Too much sugar

If menstruation is not seen in a spam of 6 months , it is advised to seek medical help.