

18/mhs07/001

Pharmacology

PHS 212

Question: briefly discuss the cyclic changes in any two of the following:

A cervix

B vagina

C breast

2 explicate any one of the following

A menstrual cycle

B hormonal regulation of the menstrual cycle

Answers: Breast: The normal breast undergoes changes through the menstrual cycle that affect all aspects of breast morphology, protein expression, and cell kinetics. This physiologic cycling appears to be disturbed in women with breast cancer and may reflect a global dysregulation of response to hormonal influences. These findings lend greater impetus to studies of normal breast physiology and its possible aberrations in women who are at increased risk for cancer. There is a new urgency to this problem because large, well-defined cohorts of women who have undergone breast biopsy are now available, and the emergence of successful chemopreventive options (3,4,5) has imparted a practical significance to the task of identifying markers of risk and surrogate markers of chemopreventive success in breast cells. The importance of morphological dating of breast in a clinical setting is 2-fold. One, the knowledge of the histological alterations occurring in the breast with the fluctuating hormonal milieu would enable the identification and enrollment of a cycle-matched subset in epidemiological studies relating to breast cancer risk. Two, some but not all studies have suggested an additional prognostic benefit for patients if surgery is performed during the luteal half of the menstrual cycle. This issue can be reexamined by retrospective morphologic dating of the breast tissue relative to the menstrual cycle to exclude discrepancies associated with chronological dating and anovulatory cycles (6,7,8). There is thus a need for a method for assessing breast samples with respect to the menstrual cycle that (1) can be implemented retrospectively, (2) can capture data regarding the ovulatory state of the cycle, and (3) is reliable and reproducible.

As morphological dating previously has been performed on “normal” autopsy or reduction mammoplasty specimens, parameters for assessing menstrual cycle changes in the breast exist. In this study, we modify these parameters to extend their ability to

assess menstrual cycle phase in patients undergoing surgery for benign breast diseases.

Cervix: Cervical mucus at midcycle is increased in amount, acellularity, water content, and fluidity. Furthermore, cervical mucus at this time is well supplied with carbohydrate and presumably amino acids. From a teleologic standpoint, we may conclude that because of these characteristics the sperm, on deposition in the vagina, find an environment propitious for their nutrition and migration through the cervical canal.

Question 2

Menstrual cycle

Medically, menstruation (also termed period or bleeding) is the process in a woman of discharging (through the vagina) blood and other materials from the lining of the uterus at about one monthly interval from puberty until menopause (ceasing of regular menstrual cycles), except during pregnancy. This discharging process lasts about 3-5 days.

Signs and symptoms

Beside the bleeding, other signs and symptoms of menstruation may include headache, acne, bloating, pains in the low abdomen, tiredness, mood change, food cravings, breast soreness, and diarrhoea.

When does it begin and end?

The menstrual cycle is the hormonal driven cycle; Day 1 is the first day of your period (bleeding) while day 14 is the approximate day you ovulate and if an egg is not fertilized, hormone levels eventually drop and at about day 25; the egg begins to dissolve and the cycle begins again with the period at about day 30. Menstruation begins day 1 and normally ends days 3-5 of the menstrual cycle.

At what age do girls go through puberty and begin and start their period (begin to menstruate)?

The average age for a girl to get her first period in the US is 12, but the range of age is about 8 to 15 years old. Women usually have periods until about ages 45 to 55.

At what age do girls begin their period?

The average age for a girl to get her first period in the US is 12, but the range of age is about 8 to 15 years old. Women usually have periods until about ages 45 to 55.

How long does menstruation last

The menstrual cycle is the hormonal driven cycle. Day 1 is the first day of your period (bleeding) while day 14 is the approximate day you ovulate and if an egg is not fertilized, hormone levels eventually drop and at about day 25. The egg then begins to dissolve and the cycle begins again with the period at about day 30.

Most periods vary somewhat, the flow may be light, moderate or heavy and can vary in length from about 2 to 7 days; with age, the cycle usually shortens and becomes more regular.