

Female

reproductive

system

Estrus cycle: in animals

Menstruation: in human

estrus cycle: (arrhythmic pattern of physiological events in female which induce the detectable morphological changes in the reproductive system (ovary, uterus, vagina) and behavior changes in animal.

Phases of estrus cycle:

1. proestrus: (12hr) rapid follicular growth on ovary by FSH from anterior lobe of pituitary gland.

Vaginal smear: showed epithelial cell only.

Behavior: quite, mating is not allowed.

2.estrus(9-20hr)

ovulation occur in this phase under effect of LH surge from anterior lobe of pituitary gland.

Vaginal smear: showed cornified cell only .

**Behavior: arching of the back ,
quivering of the ear, mating is
allowed.**

3.metestrus: (10hr)this period between ovulation and development of corpus luteum.
Vaginal smear: showed high cornified cell with few filtration of WBC.

Behavior: mating is not allowed.

4. diestrus(50-60hr) characterized by complete development of corpus luteum and high concentration of progesterone.

Vaginal smear: showed few cornified cell with high infiltration of WBC.

Behavior: mating is not allowed.

Making of vaginal smear:

- 1.put drop of normal saline on clean slide.**
- 2.handle the lab animal carefully from tail and neck.**
- 3.by using sterile loop with circular movement take vaginal mucosa.**

4. mix the vaginal mucosa with the drop of normal saline.

5. use other clean slide to make the smear.

6. dry and stain by methylen blue or gemza stain or wrights stain for 3-5min.

7. examine the morphology of vaginal cells under microscope.