



ANATOMY II

SYSTEMA GENITALIA

By
Prof. Dr. Çağdaş OTO

Ankara University
Faculty of Vet Med
Department of
Anatomy

Systema Genitalia

*** Cow (Heifer), Ewe, Doe (nanny), Mare, Sow (gilt), Bitch, Queen

Female Genital Organs (Organa genitalia feminina)

They can be divided two main parts. Ovaries are the organs produce the gamets and the tubular organs are responsible for tranportation of its.

Ovary (Ovarium),

Salpinx (Tuba uterina),

Uterus,

Vagina,

Vulva (pudendum femininum),

Clitoris

ORGANA GENITALIA FEMININA

Partes Genitales Feminina Internae

Ovarium

Tuba uterina

Uterus

Vagina

Partes Genitales Feminina Externae

Vulva

Clitoris

***Lig.latum uteri (Broad ligament) = Mesovarium, Mesosalpinx, Mesometrium**

OVARIUM (Ovary)

- ❑ Ovaries are paired of female reproductive organs that are analogous to testes in male,
- ❑ Function of the ovary is both gonad and endocrine gland.
- ❑ The shape, the size and the weight of the ovaries can be changed during the time of period.

Ovarium

- There are two parts of the ovary;
- Cortex is the outer layer. The follicles are located in (Zona paranchymatosa).
- Medulla is the inner layer. The vessels, lymphatics and nerves are located in (Zona vasculosa)

Ovarium

- **In mare and jenny**, cortex is in inner layer and medulla is in outer.
- Fossa ovulationis; Because of the position of cortex, ovulation is doing in the midside.

Location of the Ovary

- Ovaries in a pair of organ are located sublumbar part of the abdominal cavity. Position and location is related with the shape of uterine horns.
- Bursa ovarica; The sac is formed by mesovarium and mesosalpinx and it surrounds the ovaries

Location of the Ovary

- In mare, it is located just behind the kidneys at the level of 4th lumbar vertebrae.
- The diameter is 6 cm, the weight is 50 g as a walnut

Location of the Ovary

- In cow and ewe, It is located bilaterally of pelvic inlet. The size ratio of the it is smaller than mare

Location of the Ovary

- In Sow, position of it is the resemble with the cow.

Location of the Ovary

- In bitch and queen, the ovary is located behind the kidneys like mare. The size and shape is almond shape in bitch and nut shape in queen

Anatomy of the Ovary

*** **Bursa ovarica** is the sac formed by mesosalpinx in laterally, mesovarium and lig.ovari proprium in medially. It surrounds the ovary like a sheat

- ❑ **Margo liber;** Free border inside the bursa ovarica
- ❑ **Margo mesovaricus;** The border along which the mesovarium attaches to the ovary
- ❑ **Extremitas tubaria;** The end to which the fallopian tube attaches is called the tubal extremity
- ❑ **Extremitas uterina;** The other extremity is called the uterine extremity. It points downward, and it is attached to the uterus via the proper ligament of the ovary.

TUBA UTERINA - SALPINX - OVIDUCT

The uterine tube is a narrow, muscular tube which conveys the oocytes released from the ovary to the uterus. Fertilization also takes place here.

The length of the tube is different among animals (eq,bo,su: 25cm, ov: 15cm, ca: 8cm, fe: 5 cm)

- Infundibulum tubae uterinae
 - Ostium abdominale tubae uterina
 - Fimbria tubae / Fimbria ovarica
- Ampulla tubae uterinae
- Isthmus tubae uterinae
- Pars uterinae
 - Ostium uterinum tubae

Tuba uterina

- Infundibulum tubae uterinae : The funnel-shaped ovarian end of the tube

Ostium abdominale tubae uterina

Fimbria tubae / Fimbria ovarica: Indented irregular process at the free margin of infundibulum

- Ampulla tubae uterinae: Relatively wide initial segment of the tube
- Isthmus tubae uterinae: Narrow part just wide enough for the ovum to pass through
- Pars uterinae: Ending part at the uterine horn with the uterine opening

Ostium uterinum tubae

Tuba uterina

- Infundibulum tubae uterinae
 - Ampulla tubae uterinae
 - Isthmus tubae uterinae
 - Pars uterinae
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UTERUS - METRA - HYSTER

- Uterus is a muscular, expandable organ which protects the embryo during pregnancy.
- Controlled by hormones, it receives the fertilized ovum, facilitates its implantation and the nourishment of the embryo until birth. It also expels the fetus through the birth canal by muscular contraction.

The Structure of the Uterine Wall

- ❑ **Perimetrium (Tunica serosa):** Serous coat of the uterus
- ❑ **Myometrium (Tunica muscularis):** Muscular coat which consists of thick, inner, circular and thin, outer, longitudinal layer of smooth muscle
- ❑ **Endometrium (Tunica mucosa):** Thick mucous membrane that lines the uterus

Parts of the Uterus

- Uterus consists of a cervix, a body and of two uterine horns

Cornu uteri - Corpus uteri - Cervix uteri

Cornu uteri

- Two muscular tubes that diverge from the cranial end of the uterine body.
- They are located at the abdominal cavity

Cornu uteri

- In carnivores; They are fairly straight and very long, V-shaped muscular tubes.

Cornu uteri

- In mare; They are directed caially like a gondola. The dorsal surface is convex and the ventral is concave.

Cornu uteri

- In ruminants and sow; They are coiled muscular tubes like a horn of ammon.
- lig.intercornuale (bo)

Corpus uteri

- It is located at the pelvic inlet. It is related by the descending colon and rectum dorsally, bladder in ventrally.

Cervix uteri

- Most caudal part of the uterus that is located in pelvic cavity and connects it to the vagina.
- It has a powerful thick smooth muscle layer that are functioned as a sphincter of uterus.
- The lumen of the cervix is narrower canal named as cervical canal. The canal extends from internal to external uterine orifice connecting the lumen of the uterine body with that of the vagina. The canal is open only during estrus and during birth.

Cervix uteri

- ❑ Ostium uteri internum
- ❑ Canalis cervicis uteri
- ❑ Ostium uteri externum
- ❑ Portio vaginalis (except in sow): Intravaginal part of the cervix.

Inner Surface of the Cervix uteri

- **Plicae longitudinales (eq, su):** The cervix has a straight canal with longitudinal mucosal folds
- **Plicae circulares (Ru):** The cervix has usually four thick transverse folds

Cervix uteri - Plicae longitudinales (eq) / Plicae circulares (Ru)

VAGINA

The copulatory organ of the female receives the penis

- Portio vaginalis - Fornix vaginae
- Ostium vaginae - Hymen (mare and sow)

VESTIBULUM VAGINAE;

Openings part of the vagina. It is expandable

- Ostium urethrae externa

VULVA - PUDENDUM FEMININUM

- ❑ The entrance of the female genital tract. It is a vertical opening under the anus
- ❑ Labium pudendi
- ❑ Rima pudendi
- ❑ Rounded - Commissura labiorum dorsalis
- ❑ Pointed - Commissura labiorum ventralis (Rounded in eq.)

CLITORIS

- ❑ Clitoris is the homologue of the penis.
- ❑ Crus clitoridis
- ❑ Corpus clitoridis
- ❑ Glans clitoridis is at the tip of the body and is only exposed part of the organ