

Anatomy

History of veterinary anatomy

The morphology as the scientific study of the form and structure of organisms was

founded by **Aristotle** . He defined morphology as the

search for a common construction plan for all

structures . where similarities can be found, the relation

between form and function for clarification .

Aristotle performed anatomical research through dissections.

Fabrizio d Acquapendente, was the 1st worker in comparative embryology (year 1600) .

Marcello Malpighi studied the development of chick embryo (year 1687).

However for over 1500 years. Galens teaching confined for animal dissection, he published the 1st book of veterinary medicine .

Andreas Vesalius in (1543) work on human anatomy.

Johann Conrad peyer studied the anatomy of ruminants (1685).

Anatomy : is the branch of morphology dealing with the form, structure, topography and the functional interaction of the tissues and organs that comprise the body.

The dissection of dead animals is still the most important and efficient method to study and comprehend anatomy.

Classification of Anatomy

- 1- Histology** : including microscopic anatomy .
- 2- Embryology** : studying the development of organs of body from fertilization of ovum in uterus until birth .

3- Systemic anatomy : Dealing with systems of the body for example respiratory system, Nervous system..... etc.

4- Comparative anatomy : Limited to the domestic animals and poultry.

5- Topographic anatomy : which describe the relative position and functional interaction of organs and structures of the various region of the body .

Both systemic and topographic anatomy constitute the foundation of clinical practice.

Radiological anatomy

Modern technology applied in veterinary medicine deal with **X- ray , Ultrasound , Computer tomography or magnetic resonance tomography which help for clinical knowledge .**

Directional term and planes of the animal body

The body of an animal has major division which are clearly distinguishable externally

- 1- The head (Caput)
- 2- The neck (Collum)
- 3- The trunk (truncus)
- 4- The tail (Cauda)
- 5- The limbs (membra)

Each one of these sections is in turn divided into region

Division of the animal body in organs and organ systems

Cells and tissues similar in structures and function are joined together to form individual organs or organ systems. These are acting together to fulfill functions.

The individual organ is composed of different types of tissue. An individual organ is made up of two types of tissue

- 1- Parenchyma
 - 2- Interstitial tissue
- The parenchyma are responsible for the function of the organ e.g. hepatic cells of the liver , renal cells of the kidney, glandular cells of the salivary glands .

- The interstitial tissue builds the connective tissue and form lobules in the organ .
- Connective tissue also support the other tissue such as blood which enclose it in vessels and lymph vessels .

Veterinary anatomy deals mainly with domestic mammals

These are classified as :

- 1- Canine like Dogs
- 2- Feline like Cats
- 3- Ovine like Sheep
- 4- Caprine like Goat
- 5- Bovine like Cattle, cow
- 6- Equine like Horse
- 7- Poultry (Avian) Hens- Chicken
- 8- Swine like Pig

Organ Systems

- 1- Outer skin

- 2- Skeleton and joints
- 3- Musculature of the skeleton
- 4- Digestive system
- 5- Respiratory system
- 6- Urogenital system
- 7- Circulatory system
- 8- Nervous system
- 9- Sense organs
- 10- Endocrine gland
- 11- Immune system

Directional terms and planes of animal

- 1- Cranial → Toward the head
- 2- Rostral → toward the tip of nose
- 3- Caudal → toward the tail
- 4- Dorsal → toward the back
- 5- Ventral → toward the belly
- 6- Medial → center
- 7- Lateral → side
- 8- Median → middle
- 9- Proximal → trunk
- 10- Distal → away from the trunk
- 11- Palmar → toward the palm of hand
- 12- Plantar → sole of foot

13-Axial —————→ axis of digit

14-Abaxial —————→ a way the axis of digit

15- External —————→ located outside

16-Internal —————→ located inside

17-Superficial —————→ located near the surface

18-Deep —————→ located in the depth

19-Temporal —————→ located toward the temporal bone

 **20- Nasal** —————→ located toward the nose

21- Superior —————→ above

 **22- Inferior** —————→ below

23- Apical ◀————→ toward the tip

 **24- Oral** —————→ toward the mouth

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