VETERINARY ANATOMY, UNIT-1

TOPIC- A- INTRODUCTION TO ANATOMY & ITS BRANCHES,
B- DESCRIPTIVE TERMS USED IN ANATOMY
C- STUDY OF ANATOMICAL PLANES

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ANATOMY- Anatomy is the branch of biological science, which deals with the form and structure of the body and its parts.

Veterinary Anatomy is the study of the gross (external & internal), histological and embryological structures and all systems of animals, including the integumentary, gastrointestinal, respiratory, cardiovascular, lymphatic, urogenital (urinary & genital), endocrine, musculoskeletal, special sense organs and nervous systems.
1. Gross anatomy / Macroscopic/ Naked Eye anatomy
2. Histology / Microscopic Anatomy
3. Developmental Anatomy / Embryology
4. Applied Anatomy/ Surgical Anatomy
5. Radiological Anatomy
6. Comparative Anatomy

-1. Gross anatomy / Macroscopic/ Naked Eye Anatomy

A. Topographical /Regional Anatomy-

All the structures, present in the each regions or parts of the body are studied in the order
BRANCHES OF ANATOMY, CONT'D..

1. Gross anatomy / Macroscopic anatomy.

B. **Systemic Anatomy**

The branch of anatomy deals with the different systems in the animal body.

- **Osteology** (Bones)- It is the branch of systemic anatomy which deals with the study of bones
- **Arthrology** (Joints)
- **Myology** (Muscles- Skeletal, Smooth & Cardiac)
- **Splanchnology** (Visceral organs- Internal organs-Liver, Kidney,etc)
- **Angiology** (Cardio-vascular system- Heart & Blood Vessels)
- **Neurology** (Nervous system- Brain & Spinal Cord)
- **Aesthesiology** (Sense organs- Eye, Ear, Nose, Taste Bud & Skin)
2. Histology / Microscopic Anatomy

is the branch of biology which studies the microscopic structures of body (microscope)

3. Developmental Anatomy / Embryology

is the branch of biology that studies the prenatal development of gametes (sex cells), fertilization, and development of embryos and fetuses.

4. Applied Anatomy/ Surgical Anatomy

The application of anatomical knowledge to the diagnosis and treatment of disease.
5. Radiological Anatomy- Structure of the body are studied with the help of X-rays, Ultrasound and C. T. Scan

6. Comparative Anatomy- Study about analogous structure of different species of animals on comparative basis.

Ex- Liver ox, Liver of Horse, Liver Goat, Liver of sheep, Liver of Pig, Liver of Dog, Liver OF Bird.
In Standing Positions of Animals

- Cranial or cephalic means direction towards the head.
- Caudal means direction towards the tail.
- Anterior means direction towards the front.
- Posterior means direction towards the back.
- Rostral is a special term used only to describe positions or directions on the head especially towards the tip of the nose.
- Dorsal refer to “up” directions with the animal in a standing position.
- Ventral refer to “up and down” directions with the animal in a standing position.

Superior means towards the back (top surface) of a standing animal

Inferior means towards the belly (bottom) of a standing animal.
B - DESCRIPTIVE TERMS USED IN ANATOMY - CONTND..

Diagram showing anatomical terms: cranial, caudal, dorsal, ventral, proximal, distal, axial, abaxial.
**Descriptive Terms Used in Anatomy - Contd..**

- **Proximal**: Upper or superior (In long bone - Femur)
- **Distal**: Lower or inferior (In Humerus, Metatarsal)
- **Superior**: It is equivalent to upper or higher i.e. above.
- **Inferior**: It is equivalent to lower or under i.e. Below.
- **Volar**: The posterior face of the distal part of the fore limb.
- **Superficial or External** means towards the outer part of the body..
- **Deep or Internal** means below the external part of body.
B - DESCRIPTIVE TERMS USED IN ANATOMY - CONTND.
B-Descriptive Terms Used in Anatomy- Contnd..

- **Palmar:** The surface of the *fore limb* that contacts the ground in standing condition.- Below the……MC Bones-?
- **Plantar:** The contact surface of the *hind limb* in standing condition…Below the M.T.Bones-?
- **Axial:** Towards the central line of the body or any body part.
  - **Abaxial:** Away from the *axis*.
  - **Oral:** The structure towards the head.
  - **Aboral:** The structure away from the head.
B-DESCRIPTIVE TERMS USED IN ANATOMY- CONTND..
Median plane- Which divides the body into two equal half

Medial- Close to the median plane.

Lateral- Away from the median plane.

Central: A part nearest the middle.

Peripheral: A part nearest the surface.

Parietal: The body wall or the wall of the cavity.

Visceral: The viscera or organ in the cavity.

Somatic: The part of the body other than viscera.
B-DESCRcriptive TERMS used in ANATOMY- contnd
C-Study of Anatomical Planes

1. Median or Longitudinal Plane—The plane divides the body almost into 2 equal halves.
2. Paramedian or Sagittal Plane—Any plane parallel to the median plane.
3. Transverse planes—are the cross section plane.
4. Frontal or Horizontal plane—Plane that cuts the long axis of body horizontally.
C-STUDY OF ANATOMICAL PLANES

Fig. 1.1 Planes and surfaces