Stomach of Various Animals  Unit-5

Directed by – Dr Manoj Kumar Singh
Stomach of Horse

• The **stomach** is in the form of a simple saccular structure The capacity is about 8-16 litres
• It is placed at the left side on the median line on the dorsal aspect of the **abdomen** behind the **liver** and diaphragm
• It is curved and J shaped sac
• The lesser curvature is short. The cardia and pylorus are very close
• At the left extremity of the stomach, close to the entrance of the oesophagus, there is a rounded cul-de-sac known as saccus caecus
• The pyloric end is comparatively smaller
• The right extremity is smaller and is continued by the duodenum. It is attached by,
  • Gastrophrenic ligament
  • Greater omentum
  • Gastroplenic omentum
  • Lesser omentum
  • Gastropancreatic fold
Internal structure

- The mucous membrane is divided into oesophageal (non-glandular) and glandular parts, which are separated by a rough irregular line.
- The glandular part is divided into cardiac, fundic and pyloric regions according to the presence of different types of glands in the mucous membrane.
- The part on the left extremity is non-glandular being the extension of the oesophageal mucous membrane-oesophageal region and the remaining is glandular.
• The glandular part is subdivided into three zones, according to the type of glands present, but no distinct line of demarcation exists.

• A narrow zone along the margoplicatus (separating glandular and non glandular portion) is the cardiac gland region.

• Adjacent to it is the large fundic gland region.

• Remainder of the mucous membrane is the pyloric gland region.
Stomach of pig

- The stomach is simple and comparatively large.
- Capacity is 6 litres.
- The left part is large and presents a conical diverticulum known as *diverticulum ventriculi*.
- When full, its long axis is transverse and its greater curvature extends on the floor of the abdomen, midway between xiphoid cartilage and the umbilicus.
- The cardiac opening is slit like and is bounded by a fold.
Internal structure

• Mucous membrane is divided into four regions
• Over the quadrilateral area around the cardia, it is glandless and presents a number of folds
• A sharp line demarcates this above area from the rest of the mucous membrane
• The cardiac gland region is pale grey in colour and extends about the middle of the stomach.
• The fundus gland is distinguished by its thickness and mottled appearance
• The pyloric region is thinner and presents a number of irregular folds
• At the pylorus, a remarkable prominence, the **torus pyloricus** projects from the wall of the lesser curvature
Stomach of dog

- Capacity is about 3 litres. When full it is pyriform in shape.
- The left part is large and rounded while the right part is small and cylindrical.
- The parietal surface is extensive, convex, faces forwards, downwards and to the left.
- It is related to the liver; diaphragm and left ventral and lateral abdominal wall as far as the level of the 2nd or 3rd lumbar vertebra.
- The visceral surface is less extensive and is related to the intestine, pancreas and left kidney.
• The lesser curvature is nearly straight above but below it makes a sharp bend forming an angle
• The greater curvature is extensive and it extends, when the **stomach** is full behind the costal arch
• Ventrally it lies on the abdominal floor about midway-between xiphoid cartilage and pubis
Digestive System of the Dog

- Esophagus
- Liver
- Stomach
- Duodenum
- Large intestine
- Tongue
- Pharynx
- Spleen
- Small intestine
- Anus
- Cecum
Stomach of fowl

- It is made up of two parts
  - Proventriculus *(glandular)* and
  - Gizzard *(muscular)*
- The *proventriculus* is an elongated fusiform thin walled tubular organ, related laterally and ventrally to the *liver* and the spleen at its supero-caudal aspect
- It is connected in front with the *oesophagus* and behind with the gizzard
- Its mucous membrane is lined by glandular epithelium
- The *gizzard or muscular stomach* is a thick walled muscular disc with two orifices placed close together on the antero-dorsal aspect of its circumference
- It is situated behind and partly between the two lobes of the *liver*
- The mucous membrane, lining the gizzard is thrown into ridges and is covered by dense horny substance, secreted by the glands lying beneath the epithelium
THANKS