

Histomorphological Structure of Single-Compartment Stomach (In the Example of Dogs and Cats)

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Abstract: Stomach is divided into 4 anatomical regions: cardia, fundus, body and pylorus. However, the stomach is divided into only 3 histological regions: cardia, fundus and pylorus. This is because the fundus and body are histologically the same, so both regions are called the fundus in histology. The cardia is a small area surrounding the opening of the esophagus that contains mucus-secreting glands.

Keywords: Mucous membrane, muscular layer, serous layer.

Introduction. Histological layers of a one-part stomach: Mucous layer, muscular layer, serous layer. The mucous membrane (t.mucosa) is lighter in the cardial part of the stomach, darker in the pyloric part and darker in the fundal part. A study by several authors is the first to describe the appearance of canine gastric muscle UHS. The presence of gastric muscularis UHS in dogs may be due to the presence of incomplete interfaces between the inner oblique, middle circular and outer longitudinal layers of the gastric tunica muscularis or the presence of fibrotic tissue in the layer of gastric muscles [1].

Labial and zygomatic salivary glands of mixed breed dogs are tubuloacinar with mixed seromucous secretions. The duct system consists of intercalated, linear and interlobular ducts in the labial saliva and Cheek (zygomatic) salivary glands. Secretions of the glands consist of neutral, acid carboxylated and acid sulfated mucins [2].

The disappearance of the stratum compactum in the stomach of the gray wolf is as true as in other animals such as the dog, fox, and jackal, but differs in the place where it is shown in the cat and the tiger. This fact supports the hypothesis that the stratum compactum mucous membrane is not present in all animals belonging to the family Canidae, but is usually present continuously in animals belonging to the family Felidae, although both these families belong to the order Carnivora [3].

The authors emphasize that they have shown the important histological features of the stomach, especially in wild animals, and show that the stomachs of carnivores can have different forms [4].

As for the method that can be used in diagnostic procedures, we recommend the Gemza method, which is easy to perform and should be used when routine hematoxylin-eosin preparations are in doubt. There is no need to use the Warthin Starry method as a routine diagnostic method for Helicobacter in dogs because this method is expensive and time-consuming [5].

Despite the fact that the Chinese had more primary gastric lesions than the Malaysians, there was no indication that the former race had a more active gastric function, with different acidity indicators and indicators of general digestive activity: the differences were statistically insignificant. Although the average is actually higher in Malaysia. Stomach evacuation is likely to be a little slower in China. Bile regurgitation is certainly not more important in Malaysians. Among the different nitrogen values, protein nitrogen shows higher values in Chinese, probably due to the presence of more soluble mucin in gastric juice [6].

This is due to the development of glands and the supply of blood vessels in different parts of the stomach.

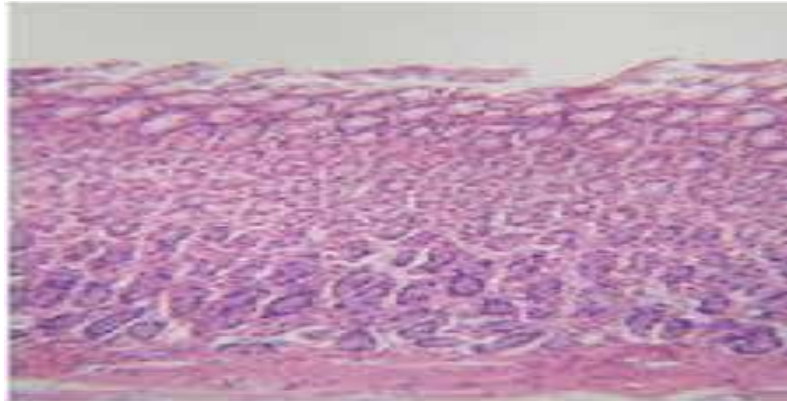


Fig. 1. Histological structure of one-section stomach.

The inner surface of the stomach is covered with a mucous layer called gastric mucosa. Mucous layer One-compartment gastric mucosa is covered with single-layered prismatic bare epithelium. Under the mucous membrane of the stomach there is a thin layer of smooth muscle called muscularis mucosae, and under it, in turn, is connective soft tissue mixed with reticular tissue. muscular layer (t.muscularis), where the submucous layer is located, which adheres the gastric mucosa to the muscles of the stomach wall, consists of two thin smooth muscle layers located in the inner circular and outer longitudinal. The cells of the outer layer of the stomach are located longitudinally in the shell and concave part of the stomach.

Tunica muscularis is a thin layer of tissue under the tunica muscularis tela submucosa in the internal hollow organs. Except for the upper third of the esophagus, the tunica muscularis consists of smooth muscle.

The muscle bundles form a spiral with a circular inner side and a longitudinal outer side. In anatomy, the two layers are called stratum circulare and stratum longitudinale.

A narrow layer of connective tissue with many blood and lymph vessels passes between the two muscle layers. Contraction of the tunica muscularis muscles serves to transport food through the gastrointestinal tract.

Serous layer (tunica serosa) is an outer membrane (layer) consisting of thin connective tissue and covered with mesothelium.

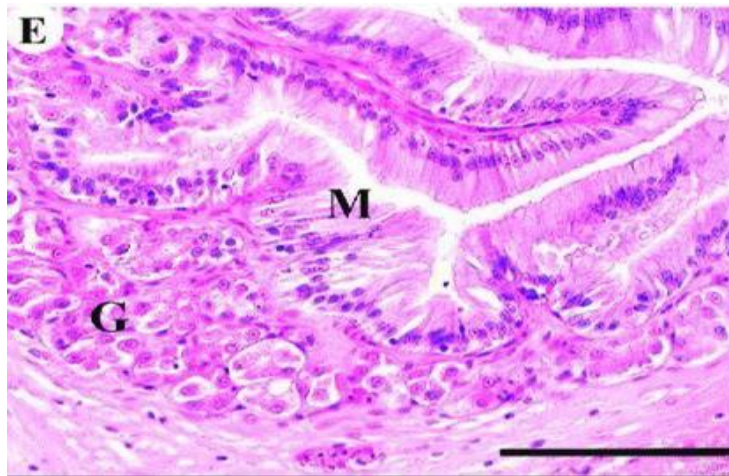


Fig. 2. (E) outer muscular layer. Gastric mucosa (M), gastric glands located in the outer muscular layer (G).

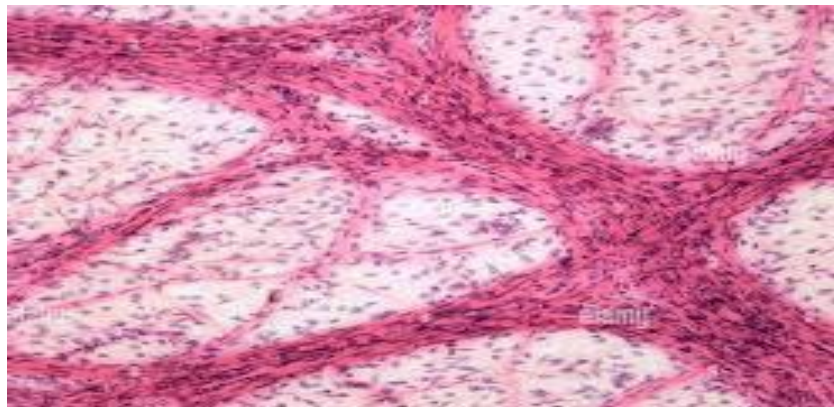


Fig. 3. Serous layer (tunica serosa)

It is covered with a transparent and liquid substance to allow the stomach to move easily inside. Unlike the tunica adventitia, it has an epithelial layer (mesothelium). Tunica serosa can limit the spread of inflammation.

Materials. Microscope .glass window .animal stomach .cover glass . Eocene .Microton and Hakoza

Methods: Observation method. Experimental method

The conclusion. stomach wall consists of mucosa, submucosa, muscle and serous layer. The stomach is covered with a serous membrane. The muscle layer under it is composed of longitudinal (external), transverse and oblique fibers. The submucosa connects the muscular layer of the stomach to the mucous membrane. This layer is rich in blood vessels and nerves. The inner surface of the stomach is covered with a mucous membrane, under the folds of which there are many glands. Mucus is produced from the entrance part (cardia) and basal glands, and enzymes are produced from the pylorus glands.



Fig. 5. The drug prepared by cutting in a microton is being examined under a microscope

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