# INTRAORGAN LYMPHATIC CHANNEL OF STOMACH OF EUROPEAN BADGER

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The peculiarities of the architectonics of intraorgan lymphatic channels of stomach of European badger are detected. Statistical analysis of morphometric parameters of capillaries and lymph vessels diameter is done and density of lymph capillaries in 1mm2 in all layers of the stomach of European badger is determined. The correlation of components of intraorgan lymphatic microcirculatory channel with the structural elements of the stomach wall is defined.

**Keywords:** European badger, stomach mucosa, muscle membrane, serous membranes, lymph vessels, lymph capillaries.

The value of the lymphatic system to human and animal life is determined by its function in the body. The lymphatic system with circulatory system are involved in metabolism, transport of hormones and vitamins, they act as a powerful lymphopoiesis and biological barrier to infectious agents [1; 6; 9]. Immune structures, which have morphofunctional communication with the lymphatic system, are of a great importance in protecting the body from infectious diseases and other pathological factors [4; 8].

It is known that the components of lymphatic microcirculatory channels of stomach are actively involved in compensatory-adaptive reactions in response to the deterioration of blood outflow [1; 6; 9].

Currently, detailed studies are exposed to intraorganic lymphatic channel of various systems, including the digestive system, represented by lymphatic capillaries and vessels, placed in the wall of the organ [4; 5; 6; 8; 9].

In the scientific literature we found no data on the characteristics of architectonics of intraorganic lymphatic channels of stomach of European badger.

**Materials and methods of research**. To clarify the characteristics of architectonics and implement morphometry of components of lymphatic microcirculatory channels of gastric, lymph vessels and capillaries were filled by indirect injection of Stefanis' mass on fresh unfixed preparations. Further, using the conventional method [2], enlightened macromicropreparations were made and their morphometric study was conducted using a binocular microscope MBS-1. Obtained morphometric parameters were subjected to statistical analysis [7]. To clarify the relationship of the stomach wall structures and components of the lymphatic channels, histological studies of macromicropreparations with lymphatic microcirculatory channels filled with Stefanis' mass (A.V. Krayeva method) were conducted [3].

**The results of research and discussion.** Lymphatic channel of stomach of European badger is built on a general principle, which is characteristic to tubular hollow organs. It is formed by nets of lymph capillaries and lymph vessels of mucous, muscular and serous membranes.

In the mucosa we found a grid of superficial and deep lymphatic capillaries and lymph vessels. Lymphatic capillaries of superficial grid of mucosa are started blindly and have the form, mainly, of convoluted tubules, at least - blind hooks. They form an anastomosis with each other and form a superficial grid, which goes into the deep grid of lymphatic capillaries (Fig. 1 and 2).

The last ones are slightly larger than the diameter of the capillary of superficial grid and they go directly to the lymphatic vessels of the mucosa. Visually vessels are distinguished from the lymphatic capillaries by the presence of valves in the vessels, that provide the look of necklace, and in fact, that the vessels are much larger than the diameter of capillaries. Lymphatic vessels of the mucous membrane in general have a wave-like shape. Merging with each other at an angle close to 90 ° and connecting with anastomoses, vessels form plexus.

Limphatic microcirculatory channels of muscle layer are formed by lymphatic capillary plexuses and lymphatic vessels of its longitudinal and circular layers. Grids of lymphatic capillaries in muscle membrane of the stomach of European badger have a staircases look (Fig. 3). Lymphatic vessels of muscle membrane are beginning from these grids, forming numerous loops, mainly rhomboid shape. Architectonics of capillary grids and plexus of lymph vessels in muscle membrane is determined by the position and direction of the muscle fibers of the longitudinal and circular layers, between which they are placed.

In gastric serosa of European badger we found isolated lymph capillaries and powerful plexus of lymph vessels of different orders. The capillaries are not very long and go into the lymphatic vessels of the first order. The lymphatic vessels of the first order after merging form lymphatic vessels of the second order, which in turn merge with each other to form a powerful vascular plexus of serous membrane that is located in subserous basis.

**Conclusions.**

1. Intraorgan lymphatic channel of stomach of European badger is formed by lymphatic microcirculatory channel of mucous, muscular and serous membranes.

2. Lymphatic microcirculatory channel of gastric mucosa is formed by superficial and deep grids of lymphatic capillaries and plexus of lymphatic vessels, of muscle layer – by the grids of lymphatic capillaries and lymphatic vessels of circular and longitudinal layers, of the serous membrane - by isolated lymphatic capillaries and plexus of lymph vessels of the first, second and third orders.

3. There is a close relationship between the components of lymphatic microcirculatory channels of mucous, muscular and serous membranes of the stomach of European badger in the form of numerous compounds and anastomoses.