

СУЧАСНІ ТЕНДЕНЦІЇ ПРОВЕДЕННЯ ЛАБОРАТОРНИХ ДОСЛІДЖЕНЬ У ВЕТЕРИНАРНІЙ МЕДИЦИНІ

МАТЕРІАЛИ

*Всеукраїнського наукового семінару,
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та ветеринарно-санітарної експертизи
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FEATURES OF THE HISTOLOGICAL STRUCTURE OF THE LYMPH NODES DROMEDARY

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Introduction:

It is known that the dromedary is an animal has a resistance against pathological aggression; this is due to the performance of the immune system is well developed [4]. In sponsoring research [1, 2], which have shown that the histological structure in anatomical areas of the lymph nodes of the dromedary is formed by three distinct areas; stroma consists of both the capsule and trabecular. The parenchyma which invades the entire lymph node tissue, consist of para-cortex area, primary and secondary follicles and medullary cords. The sinus in the lymph node also has a remarkable area. The structural organization of the parenchyma is represented by numerous islets. Unlike other mammals [3, 5, 6], the lobes are located in the lymph nodes of the dromedary multilevel (multilayer) on along the entire periphery of deep cortex units,

Materials and methods:

Somatic (axillary and superficial inguinal) and visceral (hepatic and medial iliac) dromedary lymph nodes were collected, an average age of three to five years. The experimental part of the work performed in the laboratory of histology, immunocytochemistry and morpho-pathology research center for Biosafety and environmental control resources agro-industrial complex at the Department of anatomy and pathological anatomy of farm animals, Dnepropetrovsk State Agro-Economic University. Tissue samples were fixed in 10% neutral formalin and treated with a paraffin process for coating. Paraffin sections were performed (4–7 microns) stained with hematoxylin and eosin and examined microscopically [6].

The quantitative study of the relative area of stroma, parenchyma and sinus in the structural and functional areas of the lymph nodes was performed with G. G. Avtandilov method [7, 8].

Results:

The analysis showed that the stroma is formed by the capsule and trabecular, the capsule is highly developed in the axillary lymph node, it occupies an area of 11.13 ± 0.75 %, while in the median iliac lymph node shows that 4.46 ± 1.09 %, thus we deduce that it occupies a small area. To the popliteal and hepatic lymph nodes, their surfaces are almost identical; it is of 9.03 ± 1.94 % and 9.63 ± 1.62 %. Concerning the trabecular area, with a variation according to the lymph node sex examined, it was observed that in the axillary lymph nodes, the trabecular tissue occupies an area of 11.91 ± 1.16 % in the popliteal lymph node has an area of 13.33 ± 1.37 % and in the median iliac lymph node has an area of $12.63 \pm .17$ %; whereas in the hepatic lymph node, the trabecular tissue occupies small area of 6.46 ± 1.08 %.

We deduced that the hepatic lymph node is not wealthy in trabecular mesh work. To the parenchyma, which consists of three well-defined zones it was found that the para cortical area is limited between 9.9 ± 0.53 % in the axillary lymph node and 13.7 ± 1.24 % in the lymph node iliac median. In popliteal lymph nodes and hepatic, almost the same surface, varies from 12.03 ± 1.03 % and 12.5 ± 1.20 %.

It was noted that the surface of the parenchyma of the area of the visceral lymph nodes is very large as that somatic lymph nodes, by the results obtained as following: the para-cortical occupies an area between 9.9 ± 0.53 % in the axillary lymph node and 13.7 ± 1.24 % in the median iliac lymph node. Secondly follicular areas, it was found that the visceral lymph nodes, hepatic and median iliac, parenchyma occupies a large area, of 14.33 ± 1.88 % for the primary follicles and 13.55 ± 1.21 % to secondary follicles. For medullary cord, the parenchyma has a surface area of 13.7 ± 1.30 % to the axillary lymph node and of 15.73 ± 0.68 % for the median iliac lymph nodes. In contrast, the sinuses occupy a larger area in somatic lymph nodes as the axillary lymph node of 30.6 ± 0.94 % and the popliteal lymph node of 33.48 ± 0.91 %.

Conclusions. The histological features of dromedary lymph nodes, provided by your research, which consists of cortex, para-cortex and medulla, are covered by a capsule of dense connective tissue, and have capsular extensions, of connective tissue (trabeculae), which provide support for blood vessels entering into the nodes. It then goes through the cortical sinuses into the medullary sinuses. Reticular fibers provide additional support to the matrix of stroma. The cortex is divided into an outer and an inner cortex. The outer cortex has lymphatic nodules. Among the lymph nodes of dromedary studied the quantification of the different areas is relatively occupied by the parenchymal tissue that is very obvious; the ratio of the area of the stroma and parenchyma and the characteristics for each group of nodes there for the morphometric analysis showed that the surfaces of the stroma and the various parenchymal components were almost similar in all lymph nodes that we have studied. There is a marked increase in the sinus area. The medullary cord tissue makes up most of the bulb, is a dense structure and it is composed of lymphatic tissue. The cords are separated by medullary sinuses. Be noted that the cords will project in the sinuses. Using the morphometric technique, which showed us clearly the exact proportions of the different components of the lymph nodes of dromedary, is traditionally regarded as having three compartments, the cortex, para-cortex and medulla. Wrapped in a tunic, which is the capsule and an infiltration by the trabecular tissue that spreads into the lymph tissue. They form an anastomotic network throughout the lymphoid tissue and unite in the marginal sinus hilum (sub-capsular sinus), separating the capsule lymphoid follicles. Note the presence of sinus peri and inter-follicular, they meander through the follicles. These sinuses are continuing by the medullary sinuses between the medullary cords.

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