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CHARACTERISTICS OF PATHOMORPHOLOGICAL CHANGES IN LYMPHOCYTIC LEUKOSIS IN CHILDREN

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✓ **Rezume**
Lymphoid leukosis is a malignant disease in which the bone marrow produces a large number of immature, unable to perform their functions of lymphocytes. Lymphocytes are a type of white blood cells and are responsible for immunity. Malignant leukocytes do not cope with the protective function, while they suppress the formation of normal blood cells and disrupt the functioning of other organs. The main purpose of the article is to identify specific pathomorphological changes in lymphocytic leukemia in young children. Pediatric lymphocytic leukemia is pathomorphologically manifested by focal leukemic infiltration in the bone marrow and in almost all lymphoid organs at the onset of the disease. Lymphocytic leukemia is characterized by the appearance of leukemic infiltration in specific areas of the lymphoid organs, depending on whether it develops from T or B lymphocytes. In lymphocytic leukemia, pathomorphological changes first appear in the stroma-vascular structures of the organs and then spread to the parenchyma.
Keywords: leukosis, lymphoid leukosis, bone marrow, thymus, spleen, lymph nodes, liver, leukemic infiltration.

Introduction. Acute lymphoblastic leukosis in children is the most common oncological disease in children aged 2-5 years. The main clinical-morphological sign is the multiple production of lymphocytic cells from bone Burial [1]. The disease is very severe, often ending in death. Therefore, it is considered important to identify and know the initial primary symptoms of the disease. Every year, 50 out of a million children are infected with this disease [3].

While tumors of the tissues of the blood and lymphatic system make up half of all malignant tumors, 38-40 percent of them are leukocytes. Acute limfoleicosis occurs in 4.1-0.4 out of 100,000 children under the age of 15,with a maximum between the ages of 2 and 5 if found in a ratio of 1.3: 1 in boys and girls. The modern diagnosis of acute limfoleicosis is determined on the basis of the Fab-classification, the main criterion for which is the morphological and cytological confirmation of blasts of blood cells [2]. In the case of 25-30% of blasts in a bone burial sample, acute leukosis is diagnosed, in which 3 different cells are identified: L1, L2, L3. L1 in 85% of acute limfoleicosis, L2 in 14% and L3 lymphoblasts in 1% [6,7]. The main

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diagnostic method, which is a cytomorphological method. Trepanobiopsia should be obtained from lateral bone burial, and diagnosis is confirmed from the presence of poorly differentiated blast cells in the histological preparation [5].

The purpose of the work. Taking into account these discussions, the identification of specific pathomorphological changes in the disease of young children limfoleicosis was taken as the main goal of the article.

Material and methods. For the last 10 years (2008-2018) to achieve the goal, the autopsy material of children who died of limfoleicosis was comprehensively studied at the Republican Institute of scientific investigation of Hematology and blood transfusion. During this period, a total of 1,568 sick children were treated with lymphocytic leukosis in the clinic of this Institute, of which 74 died. Of these, 47 are girls and 67 are boys. By age: 12 died under the age of 2, 28 died under the age of 4, 26 died under the age of 6, and 18 died under the age of 10. The history of the disease of the dead, laboratory examination data, an autopsy statement were analyzed and fragments from internal organs, their histological preparations were studied under a microscope, and the necessary areas were photographed and the details were written.

Results of verification. In trepanobiopsian material, i.e. bone burial, it became known that, depending on the degree of development of leukosis, if the mild form of Leukocyte-specific blast cells were concentrated in a foci-like fashion, while in the heavy form it occupied the entire area of bone burial and infiltrated diffusely. Most often, hypoplasia of blood clot foci, necrosis, other cells of bone burial are detected. Thymus. The peculiarity of children's lymphocytic leukosis was that in all cases the thymus was enlarged to one degree or another, reaching a weight of up to 30 grams in some cases. Outwardly, the lumps of Dearness are uniformly enlarged, soft, whitish-gray, in some cases the lumps are fused with each other, small foci of blood clots appear on the surface. When studied under a microscope, the thymus fragments were of different sizes, the intermediate tissue was enlarged, leukocyte cells appeared around the blood vessels.
It has been observed that thymus parenchyma infiltrates with leukemic cells only in T lymphocytic leukosis. In this case, it was found that the crustal layer of lumps is slightly expanded, in which, diffusely, the penetration of Leukocyte cells occurs. In the case of the cornea, it is concentrated only around the blood vessels, the Gassal cells increase in size and the amount of necrosis substance in them increases. Divorced. In most cases, it was observed that the weight of the spleen increased by 2-3 times compared to meior, weighing up to 750 grams in individual patients. The Shape of the limb was rounded, the outer veil was thickened, the color was pale and thickened, when cut, the tissue became dense, and the White and red pulp was indistinguishable. When seen under a microscope, it turned out that leukocyte cells initially began to accumulate in the marginal area of the white pulp of the spleen. It was then found that the lymphoid occupies a place in the lymphocytic people of the follicle and also

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penetrates into the Hatto germinative area. Another information was that it was observed that leukocyte cells entered and spread to the periarterial t Area only in some cases. So, it can be concluded that if leukosis is developed from T lymphocyte, it penetrates into the area, while in V lymphocytic leukosis, leukocyte cells accumulate mainly in the lymphoid follicle areas. In most cases, leukocyte cells have been found to infiltrate diffusely even in soft tufts of red pulp. Lymph nodes. Another peculiarity of children's limfoleikosis was that in this disease, lymph nodes do not have time to enlarge all the time. In most cases, lymph nodes were observed to be anatomically close to meior. Only in special cases was found an enlarged lymph nodes of a certain anatomical area. As the lymph nodes enlarge, their softness is preserved, not adhering to each other, the tissue is purple-reddish. When studied under a microscope, it was found that leukocyte cells were initially clustered around the peripheral sinus of the node, and then appeared inside the sinusoids of the cornea and in the intermediate tissue. Again, it was found that if leukosis developed from T lymphocytes, the mainly paracortical area expands sharply due to diffuse infiltration of Leukocyte cells. Only in some cases, the bark floor of the lymph node was manifested by a violation of its shape and morphofunction areas from the infiltration of lymphoid follicles with leukocyte cells. The liver is slightly enlarged, the color is light-brown, soft, in cross section it is found that whitish-gray foci and corridors appear on the tissue. When studied under a microscope, it was found that leukocyte cells were concentrated mainly in the Disse cavity, that is, in and around the sinusoid wall, in some cases also appearing around the central vein. As a result, hepatocytes slightly disrupted their trabecular structure and developed parenchymatous protein in their cytoplasm, vacuolar in some areas, hyaline-dropsy dystrophy in other places. In children's lymphocytic leukosis, it can be noted that their pathomorphologically specific symptoms range from bone burial to the presence of thymus, spleen, lymph nodes and Hatto in the liver as well. In bone burial, the disease is manifested in most cases by acute leukemic infiltration and differs from other types of leukosis by this sign. In the thymus, however, the data is clear, that is, mainly in T lymphocytic leukosis, leukemic infiltration begins in the intermediate tissue of the thymus and then spreads to the parenchyma, and often the bark floor is overrun by leukemic infiltration. Specific pathomorphological changes in the spleen are that, depending on the type of lymphocytic leukosis, while in T lymphocytic leukosis the mainly marginal area and periarterial area undergo leukemic infiltration, in V lymphocytic leukosis the change begins in the marginal area and then completely occupies the lymphoid follicles. In lymph nodes, too, depending on the type of such leukosis, in T limfoleicosis, leukemic infiltration prevails in the paracortical area, while in V limfoleicosis, the lymphoid follicles of the cornea are completely and the basement floor are covered by leukomic infiltration. In both types of limfoleicosis in the liver, deiarity is compensated for by the same variation, i.e. mainly perisinusoidal Disse space and leukemic infiltration of the periphery of the central vein.

Conclusions: 1.Pediatric lymphocytic leukosis is pathomorphologically manifested in all lymphoid organs with acute-looking leukemic infiltration during the onset of the disease.

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2. Depending on whether lymphocytic leukosis has developed from T or V lymphocytes, it is characteristic of the appearance of leukemic infiltration in specific areas of the lymphoid organs.
3. In lymphocytic leukosis, pathomorphological changes first appear in the stromal-vascular structures of the organs, then spread to the parenchyma.

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