



## LOCALIZATION OF NEHODZHKIN LYMPHOMAS IN CHILDREN

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### ABSTRACT

*In young children, almost all types of nxl are identified according to data from different authors, but their frequency is not always appropriate in different age groups. In different age groups, nexodzhkinsky focused on the study of lymphomas, an epidemiological study of 2,531 patients shows. Relying on the results obtained from this study, it is possible to conclude that in most cases the frequency of occurrence of different variants of NXL in sick children under 5 years of age and older than 5 years is almost the same. The exception to anaplastic T/0-cell lymphoma and Berkitt's lymphoma is much more pronounced.*

E. Maartense, Hermans, .S. Kluin-Nelemans et al. In their research in the Netherlands, a group of patient children between the ages of 7 and over 7 were studied. The study showed that most cases (32% and 36%, respectively) were diagnosed with diffuse V-large cell lymphoma. The second largest frequency of occurrence in both age groups was follicular lymphoma (34% and 15%, respectively), in which its mainly cytological Type I-II was identified (18% and 10%, respectively). The identification of other variants of NXL did not depend on age. But Thieblemont S, Grosseuvre A, Houot R. et al. In studies of sick children under the age of 10, it was shown that the patient was most often diagnosed in this group of children as well as diffuse V-cardiac cell lymphoma (in 40% of cases), while in second place by definition was marginal area lymphoma (26%), at which time follicular lymphoma was detected only in 7% of sick children. Clinical manifestations of nexodzhkinsky lymphomas in sick children have varied. In most cases, NXL begins with the appearance of a solitary tumor node and spreads through lymphogenic and hematogenous metastasis. Primary tumor foci can be located in both lymphatic nodes (nodal injury) and other organs and tissues (extranodal injury).

In the most cases, the primary manifestation of the disease is damage to the lymphatic nodes (50%). Often peripheral lymphatic nodes are involved in the process (40%). Basically, they are initially dense, painless and do not associate with the surrounding tissues. Conglomerates can then be formed by attaching to and or crushing the adjacent limb and tissues. Clinical presentation often depends on the location of the tumor foci. Expressive



differences in the frequency of damage to various organs and tissues are noted: lungs - 3-6%, esophagus - 15-40%, liver - 10-50%, bone - 5-15%, gastrointestinal tract - 10-24%, marrow - 30-40%. The clinical variant of the disease, which is initially accompanied by location and injury in the extranodal organ and tissues, is identified as primary extranodal NXL. In this, the frequency of damage to different organs and tissues is not the same: most often the gastrointestinal tract (24.3%), the Pirogov-Valdeer ring (19.4%), the cranium (10%), less often - the mammary gland (2.0%), lungs, pleura (1.1%) are involved. Research data focused on the study of clinical specificities of NXL in the elderly contradict each other. Some of them, including multicenter types, have shown that there is no significant difference between clinical signs of NXL in patients of different ages. Thus, the diagnosis of I-II Bashkirs was made in 20% of sick children and 17-25% of sick children under 7 years of age. Other predictors such as the number of extranodal areas and LDG levels have also been Age-Related. Depending on the location of the lesion, the frequency of nxl ni tuli extranodal symptoms varied from 4% to 30%. However, conflicting but interesting information can be found when the focus is on particular types of NXL.

It has been shown by some authors that a patient under the age of 12 with an aggressive type of nxl has a small overall ESOG status at the time of diagnosis in children, a large frequency of disease-spreading stages with extranodal injury and diffuse tumor growth.

While various researchers discuss the specifics of clinical and laboratory signs of NXL in sick children, there are few age-related studies as an independent negative predictor factor that increases the frequency of development of relapses that reduce the likelihood of achieving complete remission. So Shipp M. and hammual. in their studies, it was shown that being older than 10 years of age is an independent predictive factor in children with aggressive lymphomas and gives less chance (relative risk 1.8) in achieving complete remission and has a higher frequency of relapse development (relative risk 1.6). A large number of relapses were shown by other authors, as well as in patients with nehodzhkinsky lymphomas. Fisher R. and hammual. their observations showed that complete remission was achieved in 65% of cases when a patient under the age of 15 used the chop regimen in children, while in individuals over the age of 15 - 37% of cases. In another study, it was noted that relapses occur at a decreasing frequency for the first 7 years, and the effectiveness is directly related to age: the PR frequency and the median of survival are much lower compared to sick children under 15 years of age (65% and 101 months).

It is known that the various clinical and laboratory symptoms of NXL are a negative predictive factor. The most significant factors of the negative prognosis are: the general condition of the patient corresponding to 2 - 4 degrees (ECOG), stage III-IV of the disease, the presence of more than one foci of extranodal injury, the involvement of the marrow. These indicators were put on the basis of the international forecast index - XPI. Each of the factors is equal to one point, and by their sum, the patient falls into one of the four groups of children of the early outbreak of the disease:

- low (0-1 point,
- intermediate-low (2 points),
- Intermediate-High (3 points)
- high (4-5 points).



International forecast index (XPI) M. It was developed by Shipp on the basis of a retrospective analysis of 2,031 cases of high-risk lymphoma, and it has been studied and applied in practice in detail for more than 15 years. Long-term use of XPI in various clinical cases has led to different effects of particular negative predictive factors in the fate of existing patient children. Xpi indications are aggressive and indolent lymphomas are not always equally relevant for patient children. This is especially clearly observed in follicular lymphomas of the 1 - 2 cytological type. Based on the same data, a number of researchers have developed a specific international prognostic index for follicular lymphomas, the FLIPI (Follicular Lymphoma International Prognostic Index). It was based on 5 indicators of independent predictive significance. In accordance with the Ann Arbor classification, the III-IV stages of the disease are significant. Follicular nxl present in the mummy state of the patient children and the presence of more than one occtranodal furnace in them did not have a separate predictive value. At the same time, it was found by various researchers that the area of special nodal and extranodal injuries is more than four, as well as the level of hemoglobin in the blood is less than 120 g/l, is considered an independent negative factor for this nosology. Early risk groups of outbreaks are formed by the number of initial negative factors of the forecast: low risk (0-1 factors), Intermediate (2 factors), high (more than 2 factors) [25]. In the case of lymphoma in the cells of the mantle area, the actual prognostic factors were not only the age, somatic state and LDG level of the patient child, but also the level of leukocytosis in the peripheral blood. All models for predicting the results of the above treatment and the duration of life are created for all categories of sick children, regardless of age. Considering that the importance of predictive factors is not the same for Sick Children of different ages, being 5 years old and older, as stated earlier, is considered an independent negative predictive factor, an age-adjusted (Age-Adjusted) predictive index for Sick Children has been developed. Based on the available data on the role of each indicator of XPI, it was concluded that the following indicators are most significant for Sick Children: general stages (III-IV); increased LDG levels; a general condition corresponding to 2-4 degrees according to the ECOG measure. The formation of risk groups for Sick Children has also undergone changes: low - level risk - the absence of predictive factors, Low/Intermediate - 1 negative factor, high/Intermediate - 2 negative factors, high-3 negative factors. It is also advisable to divide existing sick children under 5 years of age and older into a separate group when discussing therapeutic problems. Considering the age of Monand treatment and the issues of the possibility of palliative therapy are widely discussed. Some authors attribute the low overall survival rate to the frequent development of complications on the side of the cardiovascular system in sick children. Most patients will have one or another Cardiology problem at the beginning of pediatric chemotherapy, namely damage to myocardial cells. Atrophic and dystrophic processes leading to myocardial cardiosclerosis and fibrosis negatively affect the functional and compensatory capabilities of the myocardium. Under these conditions, there is a possibility of increased cardiotoxicity of anthracyclines. However, in the absence of severe cardiovascular diseases, the risk of developing cardiotoxicity increases on a legal basis after reaching a certain cumulative dose of drugs. It is worth noting that the polyethiological decrease in the function of the parenchymatous organs will have different symptoms. The metabolic function of the liver depends on blood flow in the liver, the rate of excretion of drug



drugs with hepatocytes, intracellular concentration and activity of liver enzymes. The study of the activity of anti-tumor agents made it possible to note that the metabolism of drug drugs in the liver occurs with sequential implementation of oxidation reactions (I-phase) and conjugation reactions (II-phase) in the presence of two main , water-soluble substances with bile and urine excretion: the P-450 cytochrome system.

The activity of these reactions has been shown to be influenced by both age and various drug preparations. After the disease, a decrease in blood flow in the liver, protein-synthetic function and a decrease in the activity of the enzyme systems R-450 cytochrome occur in sick children. Changes in I-phase reactions can affect the activity and toxicity of metabolizing drugs through this mechanism (cyclophosphane, ifosfamide, idarubicin). Child-specific polypragmasia (the appointment of a large amount of drug drugs) can be the cause of the increase in the activity of R-450 cytochrome. Impaired liver function when kidney function is in moderation does not require correction to the dosage of most alkylating agents. A number of authors believe that doses of vinblastine, doxorubin, and mitoxantron should be reduced by 50% when bilirubin levels increase by 1.5 mg/dl and by 75% if bilirubin levels exceed 3.0 mg/dl (Beretta modified table, 1991). It is worth saying that the pharmacological control of any of the liver functions, in particular the appointment of hepatoprotectors, did not lead to a significant improvement in the effectiveness of the disease and a decrease in the symptoms of hepatotoxicity after their cancellation. One of the most persistent functional changes characteristic of sick children is a decrease in the rate of ball filtration. The determination of serum creatinine levels does not make it possible to correctly assess kidney functions: one of the cases is a decrease in the formation of creatinine in young children due to loss of muscle mass (including due to a decrease in physical activity), as well as its level leads to deceptive normalization. The creatinine clearance of kidney function is more pronounced. The main way to release a decrease in glomerular filtration is through the kidneys calculated chemical preparations (bleomycin, methotrexate, cisplatin, alkeran), as well as the increased toxicity of anti-tumor agents, the metabolites of which are excreted with the forehead. For this reason, the determination of creatinine clearance before starting any type of chemical therapy in sick children, as well as the implementation of monand adaptation of the cytostatics to be administered, is a universally recognized method.

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