CLINICAL CHARACTERISTICS OF PNEUMONIA IN PRESCHOOL CHILDREN WITH CONNECTIVE TISSUE DYSPLASIA

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https://doi.org/10.5281/zenodo.11412571

Abstract*. The clinical studies have shown that the presence of phenotypic signs of DST in a patient must be taken into account for the correct interpretation of the features of the clinical course of damage to the bronchopulmonary system and timely diagnosis of malformations of the respiratory organs.*

Keywords*: pneumonia. complications, connective tissue dysplasia.*

Relevance. The recent studies indicate that under the guise of repeated pneumonia, especially in cases where pneumonia occurs against the background of chronic respiratory diseases, undiagnosed congenital malformations of the lungs may be hidden. Connective tissue dysplasia negatively affects the quality of life of patients with bronchopulmonary pathology, reducing the level of psychosocial functioning of children with bronchial asthma and acute bronchitis and limiting the physical functioning of patients with community-acquired pneumonia, which is due to a more severe course and prolonged persistence of symptoms of the disease. In some cases, inflammatory pathology against the background of connective tissue dysplasia begins earlier, and suppurative processes proceed faster, covering large areas [2,3].

Russian scientists in their studies indicate that intestinal damage was detected in 78% of patients with the new corona virus infection against the background of connective tissue dysplasia. Other authors indicate that community-acquired pneumonia in children against the background of CTD is characterized by a greater likelihood of developing complications, a larger volume of damage to the lung tissue, and a more prolonged persistence of symptoms of low-grade fever and fine moist rales than in children without CTD [1, 4].

It can be assumed that the identification of phenotypic signs and clinical symptoms of DST will facilitate the timely diagnosis of congenital defects of the respiratory system in patients with frequent and recurrent pneumonia [5,6].

The purpose of the study was to study the prevalence of phenotypic signs of CTD in pneumonia.

Materials and methods of research. Clinical examinations of 96 children for pneumonia aged 3 to 6 years were carried out on the basis of early childhood departments at the City Children's Clinical Hospital No. 4 of the Shaykhantakhur district of Tashkent. All children were diagnosed with nosocomial pneumonia based on clinical, laboratory and radiological studies according to the ICD-10 classification. At the research stage, patients and their parents were invited for a clinical examination, which included questioning, clarification of the genealogical history, examination and, if necessary, laboratory and instrumental examination. To make a diagnosis, DST was used in several ways - according to T. Milkovska-Dimitrova and A. Karkashev, according to L.V. Abbakumova, according to T.I. Kadurina. This method evaluates the presence of about 40 signs of the severity of DST.

Results and discussions. The results of clinical, laboratory and radiological studies showed that out of 96 children with pneumonia, 54 children were diagnosed with signs of DST (diagram 1).

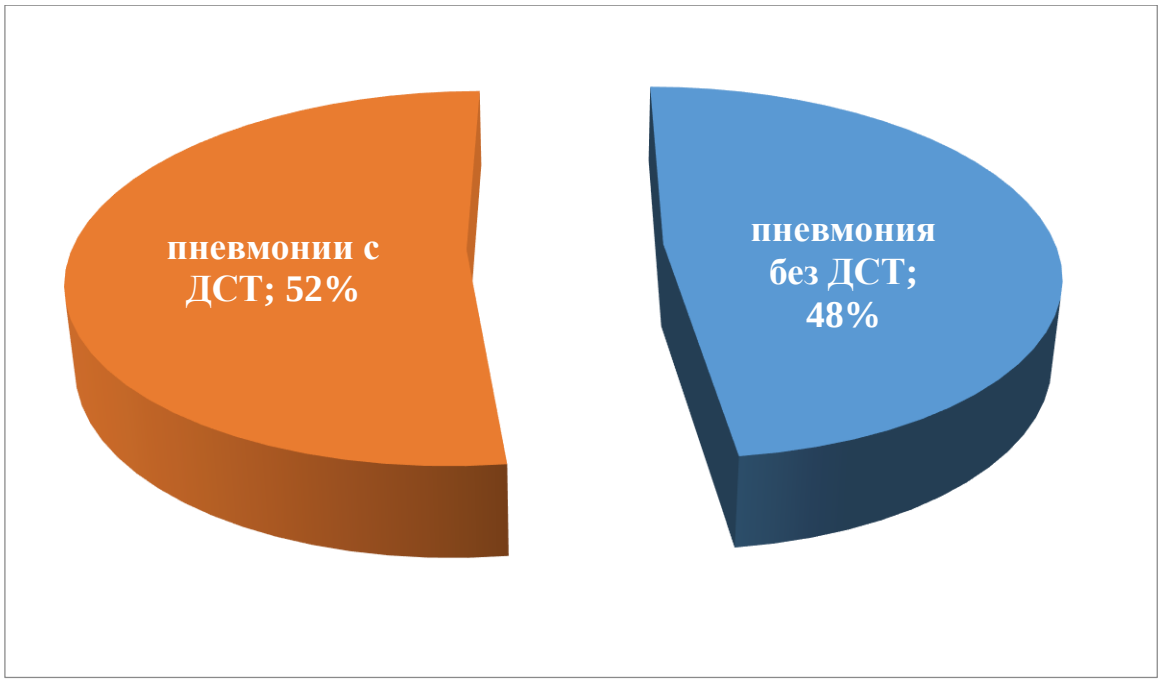

Diagram 1. Frequency of occurrence of DST in pneumonia in preschool children

Treatments were ambiguous while determination by the duration of the disease, the volume of the lesion, the nature of conservative therapy during the height of the disease, as well as the severity of dysplastic changes. However, 100% of patients continued to have complaints of cough with purulent sputum and shortness of breath. Lower respiratory tract infections following acute respiratory viral infections requiring antiviral therapy were recorded in 25% of children. Severe mixed-type ventilation disorders were observed in 68% of children. In 60% of children, a control bronchological examination revealed progressive structural changes in various parts of the lungs.

A thorough clinical examination revealed phenotypic signs of connective tissue dysplasia in 100% of children in this group. As follows from the data presented in Table 1, patients exhibited a different set of quantitative and qualitative phenotypic and clinical symptoms due to the systemic nature of the dysplastic process. Since the signs of DST did not fit into any of the known genetic syndromes, in all cases a variant of undifferentiated connective tissue dysplasia with pronounced clinical manifestations was diagnosed.

Table 1

Prevalence of signs of connective tissue dysplasia in children with pneumonia (n = 54)

Sign	%	Sign	%
Epicanthus	2	Flat chest	56
Hypertelorism of the eyes	7	Pectus excavatum	23
Vision pathology	2	Light depression on the sternum	10
Blue sclera	3	Kyphosis	66
Wide nose bridge	8	Scoliosis	21

Saddle nose	6,2	Asthenic physique	89
Protruding ears	33	Clinodactyly of little fingers	3,5
Fused lobes	1	Asymmetry nasal septum	88
High skies	17	Pale skin	87
Flat feet	3	Weakness of abdominal muscles	77
Pronounced venous pattern of the skin	3	Pigment spots	18
Severe joint hypermobility	11	Keeled chest	72

Genealogical history made it possible to establish that in the families of the examined patients, signs of DTD in immediate relatives occurred with varying degrees of penetrance in 100% of cases. Our results confirm the close pathogenetic connection between the systemic dysplastic process and those variants of lung malformations that are based on defects in connective tissue structures.

Despite the fact that all the patients we examined had various external signs of DST, in no case were the clinical symptoms of bronchopulmonary pathology regarded as a manifestation of a systemic process. There is no doubt that if practitioners were better informed, the time frame for a bronchological examination of a child with repeated pneumonia and clear external signs of hereditary connective tissue damage would be reduced, which would lead to timely diagnosis of malformed lung development, a change in patient management tactics and more favorable long-term results of treatment. It is important that in clinical practice, dysplasia can be hidden behind various masks, such as pneumonia, bronchial asthma, chronic obstructive bronchitis, and banal destructive changes in the lungs.

Conclusions.

1. In children exposed to severe pneumonia, an undifferentiated variant of connective tissue dysplasia with pronounced clinical manifestations was diagnosed in 52% of cases.

2. The presence of phenotypic signs of DST in a patient must be taken into account for the correct interpretation of the features of the clinical course of damage to the bronchopulmonary system and timely diagnosis of malformations of the respiratory organs.

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