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CLINICAL AND LABORATORY CHARACTERISTICS OF ADENOVIRUS INFECTION IN CHILDREN AT THE REPUBLICAN INFECTIOUS DISEASES HOSPITAL OF THE REPUBLIC OF KARAKALPAKSTAN

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Abstract: In the structure of acute respiratory viral infections (ARVI), adenovirus infection occupies a specific place due to its clinical polymorphism, namely the simultaneous involvement of the respiratory tract, ocular mucous membranes, lymphatic system, and gastrointestinal tract. A comprehensive study of clinical and laboratory parameters among preschool and school-aged children allows for timely accurate diagnosis and prevents unjustified antibacterial therapy.

Objective: To comprehensively evaluate the characteristic features of the leading clinical syndromes and laboratory changes in pediatric patients treated for adenovirus infection at the Republican Infectious Diseases Hospital of the Republic of Karakalpakstan.

Materials and Methods: A clinical observation was conducted on 60 pediatric patients admitted with a confirmed diagnosis of adenovirus infection. The age of the patients ranged from 3 to 15 years. The diagnosis was confirmed based on clinical-epidemiological data and the detection of adenovirus antigen/DNA in nasopharyngeal swabs and stool samples using PCR and rapid diagnostic tests (Immunochromatographic assay - ICA). General clinical, biochemical, and coprological analyses were performed for all patients.

Results and Discussion: The onset of the disease was acute in 88.3% (53 cases), accompanied by a body temperature rise to 38.5–39.5°C. The febrile period was wave-like and lasted an average of 5.8±0.6 days.

The following leading clinical syndromes prevailed in the clinical picture:

• Respiratory syndrome (95.0% — 57 children): Manifested as exudative rhinopharyngitis, tonsillar edema, and whitish-gray tonsillar plaques.

• Ophthalmic syndrome (71.6% — 43 children): Characterized by bilateral follicular or membranous conjunctivitis, eyelid edema, and lacrimation.

• Lymphoproliferative syndrome (66.6% — 40 children): Manifested as significant enlargement and tenderness of the submandibular and cervical lymph nodes.

• Gastrointestinal syndrome (35.0% — 21 children): Occurred predominantly in children aged 3-7 years and was characterized by loose, mucoid stool 4-6 times a day (gastroenteritis) and abdominal pain (mesadenitis).

Analysis of laboratory parameters showed that in the first 1-3 days of the disease, 31.6% of patients (19 children) exhibited mild leukocytosis with a neutrophilic shift, which required differentiation from a bacterial process. During the peak period (days 4-5), relative lymphocytosis (61.6% of cases) and an accelerated ESR (18-25 mm/h) predominated. C-reactive protein (CRP) levels were slightly elevated. Coprogram analysis in patients with intestinal syndrome revealed digestive disorders (steatorrhea, amylorrhea), but no erythrocytes (blood) were detected in the stool.

Conclusion: Adenovirus infection in children aged 3 to 15 years is characterized by wave-like fever, exudative inflammation of the respiratory tract mucous membranes, frequent conjunctivitis, and activation of the lymphatic system. Temporary leukocytic shifts in laboratory findings must be evaluated strictly in conjunction with systemic clinical signs and specific PCR diagnostics. In the context of the

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Republican Infectious Diseases Hospital of the Republic of Karakalpakstan, this approach significantly reduces the rate of unjustified antibiotic prescription in pediatric practice.

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