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OPTIMIZATION OF MODERN DIAGNOSTIC METHODS FOR HELMINTH-PARASITIC INVASIONS IN CHILDREN

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Annotation:
At present, the problem of helminthic invasions is very widespread in the clinical practice of primary healthcare physicians, particularly pediatricians and parasitologists. In Uzbekistan, helminthic invasions account for 90% of all parasitic diseases. Every year, more than 200,000 cases are registered in our country.
In childhood, helminthic invasions often manifest as contributing factors to the development of chronic nutritional disorders, gastrointestinal dysfunction, intoxication, sensitization of the body, and weakened immunity.

Keywords: giardiasis, parasites, diagnostics, children, methods.

Introduction:

Unfortunately, many diagnostic methods for giardiasis and nematodiasis have low sensitivity and are influenced by both subjective and objective factors. These include the intermittent shedding of Giardia cysts, difficulties in microscopic detection of parasites, and the presence of only male helminths in the human body. Despite their wide prevalence, nematodiases remain among the least detected pathologies today. In this regard, the search for early, high-quality, and informative-specific verification methods for helminthic invasions remains a pressing issue in order to ensure timely treatment.

Research Objective: To improve the laboratory diagnostics of giardiasis, ascariasis, and enterobiasis in children.

Materials and Methods: The study involved 51 children aged 1 to 14 years. Of these, 29 children had clinical symptoms, while the remaining 22 were asymptomatic and examined during routine preventive check-ups. The levels and activity of total immunoglobulins (IgG) in blood serum were evaluated. Serological examinations were conducted using the ELISA method in the Scientific Research Clinical Laboratory of the Department of Clinical Laboratory Diagnostics and DKTF Clinical Laboratory Diagnostics Course at Samarkand State Medical University.

Research Results: According to the results of the study, children with diseases caused by helminth-parasitic invasions showed significantly elevated IgG levels compared to normal values. In diagnosing diseases caused by helminth-parasitic invasions in children, coproscopic examination, perianal smear for enterobiasis, and ELISA methods were used. Among the 51 children examined, the coproscopic method yielded positive results in 15 cases, the smear method for enterobiasis in 10 cases, and the ELISA method in 26 cases. The ELISA method proved to be the most effective for detection.

Conclusion: Thus, the significant differences between the results of this study and the available healthcare data on the detection of helminthic invasions highlight the need for greater attention from physicians to this issue and the implementation of new diagnostic methods for helminth-parasitic invasions. The sensitivity and specificity of ELISA diagnostics are higher compared to conventional methods (coproscopic examination, detection of helminth eggs in stool, and perianal smear for enterobiasis), making it a more appropriate method for identifying parasitic invasions in children of various age groups.

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