



**EPIDEMIOLOGY OF HEMORRHAGIC VASCULITIS IN CHILDREN:  
PREVALENCE AND RISK FACTORS**

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**Abstract.** Hemorrhagic vasculitis ( IgA vasculitis ) is the most common form of systemic vasculitis in children and is a pressing problem in modern pediatrics due to its high incidence, variety of clinical manifestations, and risk of complications, primarily renal. Hemorrhagic vasculitis ( IgA vasculitis , Henoch - Schonlein disease) is one of the most common systemic vasculitides in childhood, characterized by immune complex-mediated damage to the microcirculatory vessels. The disease occurs primarily in preschool- and school-age children and manifests itself with lesions of the skin, joints, gastrointestinal tract, and kidneys. Despite significant advances in the study of the pathogenesis of the disease, hemorrhagic vasculitis remains a pressing problem in pediatrics due to the high frequency of relapses and the risk of complications.

An analysis of the literature revealed that the peak incidence occurs between the ages of 4 and 11 years. The disease most often develops after upper respiratory tract infections and is associated with various triggers, including bacterial and viral infections, allergic reactions, and adverse environmental factors. It has been established that timely diagnosis and adequate monitoring can reduce the risk of severe complications, particularly kidney damage.

It has been established that the highest incidence of hemorrhagic vasculitis is observed among children aged 4 to 10 years. The development of the disease is often preceded by acute respiratory infections, bacterial diseases, allergic reactions, vaccinations, and exposure to adverse environmental factors. Analysis of



*epidemiological data demonstrates the continuing relevance of this problem and the need for early identification of patients at high risk of complications.*

*The obtained results highlight the importance of timely diagnosis, dynamic monitoring, and prevention of complications in children with hemorrhagic vasculitis. Improving early detection methods and optimizing treatment and preventive measures contribute to an improved prognosis and enhanced quality of life for patients.*

*Thus, hemorrhagic vasculitis remains a pressing pediatric problem requiring further study of its epidemiological patterns, risk factors, and mechanisms of disease development. Improved methods for early diagnosis and prevention of complications contribute to improved prognosis and higher quality of medical care for children.*

**Key words:** *hemorrhagic vasculitis , IgA vasculitis , Schonlein - Henoch disease , children, epidemiology, incidence, prevalence, risk factors, kidney damage, pediatrics, immune complex inflammation.*

**The aim of the study was** to study the current incidence of hemorrhagic vasculitis in children and analyze epidemiological indicators, age characteristics, risk factors, and key trends in the spread of the disease to improve early diagnosis and prevent complications.

### **Research objectives**

To study modern literary data on the problem of hemorrhagic vasculitis in children.

To analyze the incidence and prevalence of hemorrhagic vasculitis among the pediatric population.

To determine age and gender characteristics of the occurrence of the disease in children.

To assess the influence of infectious, allergic and other risk factors on the development of hemorrhagic vasculitis .

To study the clinical features of the disease in childhood.

To analyze the frequency of skin, joint, gastrointestinal tract and kidney lesions in children with hemorrhagic vasculitis .



To identify current trends in morbidity and factors influencing the prognosis of the disease.

To justify the need for early diagnosis, dispensary observation and prevention of complications in children with hemorrhagic vasculitis .

**Research methods** . The study was conducted as an analytical review of Russian and international scientific literature devoted to the study of the incidence of hemorrhagic vasculitis in children. Scientific publications presented in the international databases PubMed, Scopus, and Web were used to search for information. of Science, Google Scholar, as well as materials from the World Health Organization and specialized pediatric and rheumatological publications.

The study utilized methods of systematic search, analysis, comparison, and synthesis of scientific data. It assessed the incidence rates, prevalence, age- and gender-specific characteristics of hemorrhagic vasculitis in children, as well as analyzed the risk factors contributing to the disease's development.

Particular attention was paid to studying the role of infectious agents, allergic reactions, genetic predisposition, and environmental factors in the development of hemorrhagic vasculitis . The data obtained were systematized and subjected to comparative analysis to identify current epidemiological trends and patterns of disease progression in children.

The results of the study are presented in the form of a generalized description of modern data on the incidence of hemorrhagic vasculitis , the characteristics of its distribution and the main directions for the prevention of complications in the pediatric population.

## **Research results**

An analysis of domestic and international scientific publications has established that hemorrhagic vasculitis (IgA vasculitis) is the most common systemic vasculitis in childhood. The highest incidence is observed among children aged 4 to 11 years, with boys being affected somewhat more frequently than girls. The disease is recorded in all regions of the world, but incidence rates may vary depending on



the climatic, geographical, socioeconomic, and ethnic characteristics of the population.

The analysis revealed that in most cases, the development of hemorrhagic vasculitis is preceded by acute respiratory infections, bacterial upper respiratory tract infections, allergic reactions, vaccinations, or exposure to adverse environmental factors. It has been established that a disruption of immune regulation plays a key role in the pathogenesis of the disease, leading to the formation of immune complexes containing immunoglobulin A (IgA), which are deposited in the walls of small vessels and trigger the inflammatory process.

The leading clinical manifestation of the disease has been identified as cutaneous hemorrhagic syndrome, observed in almost all patients. Joint damage is observed in a significant proportion of children and manifests as arthralgia or arthritis. Abdominal syndrome is accompanied by abdominal pain of varying intensity and occurs in many patients. The most serious complication is kidney damage, which can determine the further prognosis of the disease and requires long-term follow-up.

The obtained results indicate that timely diagnosis of hemorrhagic vasculitis, early detection of kidney damage, and adequate treatment and preventive measures help reduce the risk of complications and improve disease outcomes. Analysis of current data confirms the need for further study of risk factors and improvement of early diagnosis methods for hemorrhagic vasculitis in children.

**Conclusions.** Hemorrhagic vasculitis ( IgA vasculitis ) is the most common systemic vasculitis in children and plays a significant role in the structure of childhood rheumatic diseases. The highest incidence is observed among children aged 4 to 11 years, with the disease being somewhat more common in boys.

The main factors contributing to the development of hemorrhagic vasculitis are acute respiratory infections, bacterial diseases, allergic reactions, exposure to unfavorable environmental factors and genetic predisposition.



The pathogenesis of the disease is based on immune disorders associated with the formation and deposition of IgA-containing immune complexes in the walls of small vessels, which leads to the development of a systemic inflammatory process.

The most common clinical manifestations of hemorrhagic vasculitis include cutaneous hemorrhagic syndrome, joint damage, gastrointestinal tract damage, and kidney damage. Kidney damage is the most significant prognostic factor and requires timely detection, long-term monitoring, and control to prevent the development of chronic kidney disease.

Early diagnosis, comprehensive assessment of clinical manifestations, and timely initiation of treatment help reduce the incidence of complications, decrease the risk of relapse, and improve the prognosis. Improving prevention programs, follow-up care, and early identification of risk factors are important areas for improving the quality of medical care for children with hemorrhagic vasculitis .

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