

## HEMORRHAGIC DIATHESIS: TREATMENT AND CLINICAL PRESENTATION

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**Abstract:** Hemorrhagic diathesis is a pathological condition characterized by a tendency to bleed, which occurs due to a decrease in the number of platelets or the fragility of blood vessels. It is manifested by spontaneous bleeding, prolonged bleeding episodes, and hematomas (ecchymoses), among other clinical symptoms. This disorder is commonly associated with abnormalities in the blood coagulation system, such as reduced platelet count and function, altered fibrinogen levels, or weakened blood vessels.

**Keywords:** Hemorrhagic diathesis, bleeding, coagulation system, clinical observation, laboratory testing, and genetic analysis.

### INTRODUCTION

Hemorrhagic diathesis is a pathophysiological condition related to disorders of the blood coagulation system or the state of blood vessels. It often leads to prolonged or difficult-to-control bleeding episodes. Clinically, the disease is characterized by thrombocytopenia, diluted blood, and other coagulation system abnormalities. It can occur in various forms and may be linked to hereditary factors or external environmental influences[1]. Patients with this condition often exhibit signs such as excessive bleeding and prolonged bleeding even from minor injuries. The relevance of hemorrhagic diathesis today is linked to several significant factors. Its prevalence, the variability of clinical presentations, and the individual characteristics of affected patients necessitate the development of effective treatment methods. Several key aspects contribute to the disease's importance:

**Prevalence and risk of progression:** Hemorrhagic diathesis is a commonly encountered condition, particularly in childhood, with varying clinical manifestations and forms. If not diagnosed in a timely manner, patients may face life-threatening complications such as severe bleeding or hematoma formation[2]. Currently, various forms of hemorrhagic diathesis, including thrombocytopenia, coagulation disorders, and vascular fragility, are recognized as serious clinical issues in medicine. Acute or hereditary forms of the disease pose particular risks for patients.

**Hereditary and environmental factors:** Many studies have highlighted the genetic factors influencing the development of hemorrhagic diathesis. Hereditary characteristics play a significant role in the onset of this condition. In medicine, hereditary forms of hemorrhagic diathesis have been clearly documented, potentially leading to transmission across generations in children[3]. In addition, environmental factors such as infections, malnutrition, exposure to harmful chemicals, stress, and other external influences may contribute to the development of the condition. These factors must be taken into account, as they can significantly affect disease progression.

**Need for effective diagnosis and treatment:** The relevance of hemorrhagic diathesis is closely tied to the need for effective diagnostic and treatment approaches. Early detection and timely medical intervention can help save lives. However, current treatment methods are not always fully effective due to the variability in forms and systemic disturbances of the condition[4]. Accurate diagnosis through clinical observation, laboratory testing, and genetic analysis is essential for effective treatment. Furthermore, patients require proper management of bleeding episodes, coagulation status, and platelet levels.

**Impact on public health and economic burden:** Hemorrhagic diathesis has a considerable impact on public health. Its various forms and degrees of severity reduce patients' working capacity. The

financial costs associated with treatment, including medical interventions, rehabilitation, and ongoing care, contribute to increased pressure on healthcare systems. The widespread occurrence of the disease and the associated expenses result in a heavy economic burden, affecting not only healthcare but also the broader socioeconomic environment.

**Scientific research and investigations:** The growing interest in scientific research regarding hemorrhagic diathesis reflects its medical importance. Advancements in diagnostic tools, the identification of biological markers, and genetic testing allow for better disease understanding and improved prevention. Continued scientific exploration aims to develop new and effective methods for treatment and management.

**Global medical strategies:** International health organizations such as the World Health Organization (WHO) are actively working on global strategies to prevent, manage, and treat hemorrhagic disorders. These efforts include the establishment of international standards to reduce the prevalence[5], medical, social, and economic consequences of hemorrhagic diathesis on a global scale.

### MATERIALS AND METHODS

Several methods were employed in the study to examine the key clinical features, laboratory indicators, genetic aspects, and treatment approaches of hemorrhagic diathesis:

**Clinical observation:** The clinical conditions of patients were analyzed during the study. Age, gender, medical history, and presenting symptoms were fully reviewed. This method allowed for the development of a clinical profile and identification of symptom patterns.

**Laboratory investigations:** Blood tests were conducted to determine platelet count and coagulation parameters. These laboratory tests helped track changes in platelet levels and fibrinogen concentration, contributing to disease severity assessment.

**Genetic studies:** Genetic analyses were carried out to explore the hereditary factors influencing hemorrhagic diathesis. These studies enabled the identification of hereditary patterns in certain forms of the disease.

**Statistical analysis:** Statistical methods were applied to summarize and interpret the research findings. Relationships between patient data, disease forms, and clinical features were analyzed. These analyses assisted in identifying the primary factors and clinical variants of the disease.

### RESULTS

The results obtained during the study are as follows:

**Genetic factors:** Some forms of hemorrhagic diathesis have a hereditary basis, which is associated with genetic abnormalities. Genetic analysis revealed that many patients suffering from hemorrhagic diathesis had a family history of similar conditions.

**Coagulation system disorders:** Numerous coagulation system disorders were observed in patients with hemorrhagic diathesis. A decrease in platelet count and a weakened blood coagulation system significantly affected the clinical condition of the patients[6]. Many patients experienced hematomas and continuous bleeding.

**Age and gender:** The study also identified the influence of age and gender on hemorrhagic diathesis. Most patients experienced the condition during childhood, and it was found to be more common among males.

**Clinical symptoms:** In 50% of the patients, bleeding, subcutaneous hematomas (ecchymosis), and redness were observed. These symptoms were identified as the most prominent signs of hemorrhagic diathesis.

### CONCLUSION

Hemorrhagic diathesis remains a pressing issue in modern medicine due to its various forms and clinical manifestations, which complicate treatment. The main conclusions drawn from the research are as follows:

1. **Widespread prevalence of hemorrhagic diathesis:** Various forms of hemorrhagic diathesis are widespread globally, and there is currently no fully effective treatment. The condition's early onset, typically during childhood, increases its social and economic burden. Early detection and timely treatment are of vital importance.
2. **Hereditary and environmental factors:** Genetic and environmental factors play a significant role in the development of hemorrhagic diathesis. Genetic studies confirm the hereditary basis of some forms of the disease. However, external factors such as infections, chemical exposure, and poor diet also significantly impact disease progression. Therefore, both genetic and environmental factors should be considered in prevention and treatment.
3. **Clinical features and diagnostics:** The clinical presentations of hemorrhagic diathesis are highly variable, making diagnosis challenging. Differentiating between mild and severe forms is based on changes in the coagulation system and platelet counts. The study identified hematomas, bleeding, and small subcutaneous blood accumulations as common symptoms. Appropriate diagnostic tools are essential for early detection and treatment.
4. **Treatment methods and efficacy:** Treatment approaches are diverse and their effectiveness depends on individual cases. Platelet concentrates, plasminogen activators, and other hemostatic therapies were used to increase platelet counts and restore coagulation. In severe cases, genetic therapy and innovative treatments are expected to be introduced, although they currently lack high efficacy and require improvement.
5. **Age and gender-specific characteristics:** Studies identified age- and gender-related differences in hemorrhagic diathesis. X-linked disorders like hemophilia are more common in males, whereas females tend to exhibit milder forms. Age and gender must be considered in treatment strategies, and effective approaches for early diagnosis and treatment in childhood must be developed.
6. **Social and economic impact:** Hemorrhagic diathesis is not only a medical issue but also a significant social and economic concern. Treatment, monitoring, and rehabilitation are costly. The chronic nature of the disease reduces work capacity, leading to societal challenges. Implementing effective early detection and treatment strategies can benefit not only healthcare systems but also social security frameworks.
7. **Future research and development opportunities:** Ongoing scientific research in hemorrhagic diathesis opens possibilities for new treatments, diagnostic methods, and genetic analysis tools. Global strategies and technologies, including gene editing, biotechnology, and advanced diagnostics, are needed to prevent and manage the disease more effectively.
8. **Integrated approaches in medicine:** Combating hemorrhagic diathesis requires an integrated approach involving genetics, clinical medicine, laboratory sciences, and therapeutics. Developing new methods for comprehensive analysis and treatment can improve patients' quality of life. Innovations in therapy and technology offer promising potential to improve the overall condition of patients. The study results show that many factors influence the development of hemorrhagic diathesis. These include genetic predisposition, weakened blood coagulation systems, and external environmental factors. Comprehensive approaches are essential for diagnosing and treating this condition. Based on the study, the development of new treatment methods and comprehensive strategies for improving blood coagulation processes is of great importance.

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