SCIENCE AND INNOVATION

INTERNATIONAL SCIENTIFIC JOURNAL VOLUME 1 ISSUE 5 UIF-2022: 8.2 | ISSN: 2181-3337

УДК.579.6.632.4

#### TYPES OF HEMORRHAGIC DISEASES, CHANGES IN NEWBOENS, THEIR EARLY DIAGNOSIS

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## https://doi.org/10.5281/zenodo.7002893

**Abstract.** Treatment and Prevention, Hemorrhagic Diseases of Newborns will be covered in detail! The origin of hemorrhagic diseases and how dangerous they are will be discussed in detail in this article on early diagnosis and prevention! Raising the next generation and a healthy generation.

**Keywords**: classical and late forms, Primary and secondary hemorrhagic diseases in children, Clinical manifestations and diagnosis, Treatment and prevention, Hemorrhagic disease of the newborn, Early and prevention of hemorrhagic disease of the newborn.

# ВИДЫ ГЕМОРРАГИЧЕСКИХ ЗАБОЛЕВАНИЙ, ИЗМЕНЕНИЕ НОВЫМИ, РАННЯЯ ИХ ДИАГНОСТИКА.

Аннотация. Лечение и профилактика геморрагических заболеваний новорожденных будут подробно освещены! Происхождение геморрагических заболеваний и их опасность подробно рассмотрены в этой статье о ранней диагностике и профилактике! Воспитание будущего поколения и здорового поколения. Symptoms of hemorrhagic shock have the following stages:

Ключевые слова: классические и поздние формы, Первичные и вторичные геморрагические заболевания у детей, Клиника и диагностика, Лечение и профилактика, Геморрагическая болезнь новорожденных, Ранняя и профилактика геморрагической болезни новорожденных.

#### INTRODUCTION

- 1. I scene compensated shock;
- 2. Stage II decompensated stroke;
- 3. Stage III is an irreversible blow.

The stages of shock are determined on the basis of an assessment of the complex of clinical manifestations of blood loss, consistent with pathophysiological changes of organs and tissues.

Stage 1 of hemorrhagic shock (minor emission syndrome or compensatory shock coverage) typically develops with blood loss corresponding to approximately 20% (15% to 25%). Compensation for losing this stage. It is carried out by hyperproduction of catholalamines. In the clinical picture, the arrows indicate changes in cardiovascular activity of a functional nature, changes in the color of the skin vessels, subcutaneous vascular 100 Ud / min, moderate gigotenia and venous hypotension. Arterial hypotension is absent or poorly pronounced.

#### **Causes of hemorrhagic syndrome**

Most often, hemorrhagic syndrome develops against the background of secondary thrombocytopathy and thrombocytopenia, prothrombin complex, thrombohemorrhagic syndrome, as well as a lack of capillary toxicosis factors. In some cases, the appearance of pathology is associated with Vergolf's disease, hemophilia, prothrombin deficiency in the blood. The development of hemorrhagic syndrome can also be treated with long-term use of high-dose drugs that bind platelets and remove the blood clotting process (antagonists and anticoagulants). This factor has recently been a common cause of this pathology. Psychogenic factors are also ignored.

# Symptoms and types of hemorrhagic syndrome

The main symptoms of the syndrome are bleeding of various types and difficulties and at the level of hemorrhagic erosions of the skin. Bleeding can occur spontaneously or as a result of external factors: physical overload, hypothermia, trauma. Skin appearances vary, they may have the formation of spot bleeding, extensive inflammation, ulcerative necrosis surface, and so on. There are five hemorrhagic syndromes. Let's list and characterize each of them:

Hematoma - hemophilia, is typical for lack of coagulation factors. In this case, there is large bleeding in the muscles, soft tissues and large joints. As a result, the functions of the musculoskeletal system are gradually evolving.

## MATERIALS AND METHODS

Microcirculatory (petechial) - characterized by superficial bleeding under the skin, occurring with the smallest lesions. This type of thrombocytopathy is often associated with fibrin deficiency, an inherited deficiency of coagulation factors.

Microwave-hematoma (mixed) - the appearance of petechial hemorrhage and is characterized by large hematomas, very rare with bleeding in the joints. Mixed species are diagnosed with a lack of coagulation factors, an overdose of anticoagulants, thrombohemorrhagic syndrome, villebrand disease.

Vasculitis-purple - characterized by the appearance of bleeding in the form of sprays, may be accompanied by purulent and intestinal bleeding. Such hemorrhagic syndrome is accompanied by vasculitis and thrombocytopathy.

Angiomatosis is characterized by telangiectasia, angiomas, and is characterized by persistent bleeding in areas of vascular pathology.

Diagnosis of hemorrhagic syndrome

- a) A number of studies are required to confirm the diagnosis, including:
- b) detailed analysis of blood and urine;
- c) coagulation tests;
- d) study of prothrombin and fibrinogen levels;
- e) counting of platelets in peripheral blood, etc.
- f) Treatment of hemorrhagic syndrome

The principles of treatment of patients with hemorrhagic syndrome are determined by the causes of pathology, the severity of symptoms and co-morbidities. Usually, the drug is prescribed using vitamin K, hemostatic, ascorbic acid, and so on. In some cases, transfusions of plasma and blood components are recommended.

Early, classical and late forms of hemorrhagic disease of the newborn

In the classification of hemorrhagic disease of the newborn, three forms are distinguished: early, classical and late.

Symptoms of the early form appear within 24 hours after birth. The early form is often associated with the mother taking medications that interfere with vitamin K metabolism. This form of the disease cannot be prevented by prescribing vitamin K after birth. Hematemesis is characterized by pulmonary hemorrhage, melena, bleeding in the abdominal organs, adrenal glands.

## RESULTS

SCIENCE AND INNOVATION INTERNATIONAL SCIENTIFIC JOURNAL VOLUME 1 ISSUE 5 UIF-2022: 8.2 | ISSN: 2181-3337

The classic form is manifested by bleeding in 2-7 days of life. The classic form often develops in newborns with milk deficiency and lack of prophylactic use of vitamin K immediately after birth. Gastrointestinal bleeding, skin syndromes of neonatal hemorrhagic disease, bleeding from umbilical ulcers, bleeding from the nose, and impaired blood clotting at the injection sites are characteristic. Intracranial hemorrhage is less characteristic for the classical form.

The delayed or late form of hemorrhagic disease of the newborn is characterized by the onset of symptoms from 8 days to 6 months of life, although, as a rule, the manifestation occurs at the age of 8-12 weeks. The disease occurs only in infants who are breastfed and do not receive vitamin K prophylaxis after birth. In half of the cases, the late form of hemorrhagic disease of the newborn develops against the background of diseases and conditions of the child, which contribute to a violation of vitamin K synthesis and absorption (cholestasis, malabsorption syndrome). This form is often used to record intracranial hemorrhage (50-70%), skin bleeding, bleeding from the injection site, umbilical ulcer gastrointestinal tract and so on. Without prevention, the frequency of early and classical forms of HRD is 0.2-0.7%, late - 4.4-7.2 per 100,000 newborns.

## Risk factors for neonatal hemorrhagic disease

There are 13 risk factors for the development of hemorrhagic disease in the newborn. Exclusive breastfeeding. The amount of vitamin K in breast milk ranges from 1 to 10 mcg/1, on average 2-2.5 mcg/l, which is much lower than in artificial milk formulas (approximately 50 mcg/l in formulas for full-term infants; 60-100 mcg/l formula for premature infants). Lack of prophylactic use of vitamin K immediately after birth.

- 1. Chronic fetal hypoxia and congenital asphyxia.
- 2. Birth injury.
- 3. Delay in intrauterine development.
- 4. Surgical caesarean section.
- 5. Premature birth.

The use of antibiotics has a wide range of actions.

Long-term parenteral nutrition in conditions of insufficient supply of vitamin K. Diseases and conditions of the child that lead to a violation of vitamin K synthesis and absorption: malabsorption syndrome (cystic fibrosis, diarrhea with malabsorption of fats); short bowel syndrome; cholestasis.

## Preeclampsia.

Hemorrhagic disease of the newborn can also be caused by maternal diseases (liver and intestinal diseases).

Medications for the mother during pregnancy:

- a) Indirect anticoagulants (from the group of neocoumarins, warfarin);
- b) Anticonvulsants (barbiturates, carbamazepine, fenition, etc.);
- c) Large doses of broad-spectrum antibiotics (especially cephalosporins);
- d) Anti-tuberculosis drugs (isoniazid, rifampicin);
- e) Non-steroidal anti-inflammatory drugs (acetylsalicylic acid, indomethacin and other platelet inhibitors) immediately before birth.

## Clinical manifestations and consequences of hemorrhagic disease of the newborn

The clinical picture of HRD is characterized by the appearance of spontaneous bleeding of any localization:

a) Bleeding from the gastrointestinal tract (melena, hematomezis).

# SCIENCE AND INNOVATION INTERNATIONAL SCIENTIFIC JOURNAL VOLUME 1 ISSUE 5

UIF-2022: 8.2 | ISSN: 2181-3337

- b) From an umbilical ulcer (including when the rest of the umbilical cord falls off).
- c) Skin bleeding (ecchymosis, petechiae).
- d) Bleeding from the lungs and nose.
- e) Bleeding from injection sites.
- f) Bleeding in the abdominal organs.
- g) Bleeding in the adrenal glands.

Against the background of vitamin K deficiency, hematomas may develop at the site of injury (cephalohematoma, ecchymosis).

The delayed form is characterized by intracranial hemorrhage: subdural hematomas (40%), parenchymal (40%), intraventricular (10%), and subarachnoid (10%). More than 1/3 of children may develop ecchymosis a few weeks before cerebral hemorrhage. As a rule, intracranial hemorrhage is recorded only in infants who are breastfed.

Consequences and complications of hemorrhagic disease of the newborn:

Anemia develops with significant bleeding.

Thrombocytopenia is not specific, but it can occur as a result of secondary, major blood loss. Vitamin K deficiency can be accompanied by thrombosis, because with K-hypovitaminosis in the liver, the synthesis of anticoagulants - C and C proteins is also disrupted.

Prevention of hemorrhagic disease of the newborn: medication and nutrition

According to clinical guidelines, it is recommended to prevent hemorrhagic disease of the newborn. The drug, such as intramuscular injection menadione 1% solution of sodium bisulfite, should be administered once in the first hours after birth, 1 mg / kg (0.1 ml / kg), but not more than 0.4 ml. Although surgical interventions are recommended for prophylaxis 2-3 days before surgery, with possible severe parenchymal bleeding.

It is prescribed to children during parenteral nutrition to prevent hemorrhagic diseases of newborns. vitamin complex "Vitalipid N", the content of vitamin K in it is 20 mcg per 1 ml. Complete parenteral nutrition The standard dose is 4 ml / kg / day for newborns weighing less than 2.5 kg and 10 ml / day for other infants. Against the background of the transition to enteral feeding, the dose is reduced accordingly.

# HEMORRHAGIC DISEASES IN CHILDREN.

Hemorrhagic diseases are pathological conditions characterized by a subsequent developmental trend of hemorrhagic exacerbation syndrome based on certain changes in the hemostasis system.

This is a large group of diseases with different genesis and clinical manifestations, and their combination into one group is due to the fact that all of these diseases are characterized by increased bleeding syndrome.

According to the three systems of hemostasis, hemorrhagic diseases are divided into 3 groups: 1. Vasopathy - at the heart of this pathology are changes in the vascular joint.

2. Thrombocytopathy is based on changes in the platelet joint of hemostasis.

3. Coagulopathy: the basis is a deficiency of coagulation factors.

In terms of prevalence in hemorrhagic diseases in children, vasopathies are the most common. Vasopathy is a combined group of the following diseases:

- 1. Hypovitaminosis of vitamin C.
- 2. retinal angiomatosis
- 3. hereditary simple purpura
- 4. Shenlein-Genoch disease (same hemorrhagic vasculitis, capillary toxicosis, according to the international classification of allergic purpura diseases).

SCIENCE AND INNOVATION INTERNATIONAL SCIENTIFIC JOURNAL VOLUME 1 ISSUE 5 UIF-2022: 8.2 | ISSN: 2181-3337

### DISCUSSION

Intestinal microbiota are trillions of symbiotic bacteria that live in the gastrointestinal tract, which is an important component in maintaining a home's health. The most numerous bacterial filaments are Bacteriodetas and Firmicutes, which make up more than 90% of the intestinal microbiota. In healthy people, the gut microbiota is relatively stable, forming a host-bacterial interaction. Detailed analysis suggests that the gut microbiota controls the development and function of the brain in three ways (i.e., immunity, neuroendocrine, and vagal pathways) and that disruption of the microbiota community can lead to neuropsychiatric disorders. The connections between the gut microbiota-gut-brain axis really plays an important role in cognitive function. However, studies have shown that the intestinal microbiota of the elderly is different from that of the young. Disruption of the intestinal microbiota community (dysbiosis) occurs during normal aging (i.e., diversification and loss of beneficial taxa), so the intestinal microbiota of the elderly often represents an anti-inflammatory phenotype.

The gut microbiota is made up of trillions of microorganisms such as bacteria, viruses, fungi and even parasites. Among the functions of the microbiota are the absorption of calcium and iron, which produce energy and protect us from invasion from other bacteria and microbes that can become pathology. In addition to performing various functions on the development of the immune system.

## What is a gut microbiota and how is it formed

The gut microbiota is a completely different composition in each person, formed at birth. The mother carries various microorganisms during childbirth. about vaginal delivery, through the vagina and feces. Or the surrounding microorganisms during childbirth by cesarean section. That is, the microbiota begins to form from birth.

But at that point, it will take years to start the process. In the first 3 years of life, the microorganisms that make up the gut microbiota are diverse. And it continues to diversify and stabilize until adulthood, which breaks down and breaks down as it matures. The functions of the microbiota are very important, so it is very important to improve and protect it throughout life.

#### CONCLUSIONS

The functions of the microbiota for human health are essential, in fact it is a functional organ of the body. This composition of microorganisms works in conjunction with the gut it performs four remarkable functions.

Facilitate digestion: helps the intestines absorb nutrients such as sugar, vitamins or essential fatty acids and more.

This is important in the development of the digestive system: In the first stage of infancy and in infants, the microbiota is still weak and the digestive system is immature. Therefore, special attention should be paid to the fact that bacteria that can enter the baby's system through contact with food, water or dirty surfaces.

Creates a protective barrier: other bacteria that threaten against organisms live together in the human body. Strengthen protection: Helps strengthen the immune system, which helps intestinal microbiota, which protects us from bacteria and viruses. How to improve the microbiota

There are several ways to improve and strengthen the gut microbiota, as it has some effect on the community of microorganisms to improve their health so that they can perform their functions properly. The method of improving the intestinal flora es the following set of instructions:

SCIENCE AND INNOVATION

INTERNATIONAL SCIENTIFIC JOURNAL VOLUME 1 ISSUE 5 UIF-2022: 8.2 | ISSN: 2181-3337

Nutrition: Consumption of natural foods free of harmful substances that are harmful to the health of microbiota. Keep an eye out, keep going, a varied, balanced, moderate diet with lots of natural foods is the best way to maintain good health at all levels.

Probiotics: Foods or supplements that contain live microorganisms as they serve to improve and maintain the intestinal flora.

Prebiotics: in this case the high fiber content of food with this a they provide nutrients to the intestinal microflora.

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