



CLINICAL FEATURES OF CONSTIPATION IN CHILDREN OF DIFFERENT AGES AND TACTICS OF MANAGEMENT

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Annotation

This article analyzes the clinical features of constipation in children of different ages, etiological factors, and modern treatment and prevention approaches. Constipation manifests itself differently in children from infancy to school age, and dietary habits, immaturity of intestinal motility, psychoemotional factors, and a sedentary lifestyle play an important role. If constipation in newborns is more functional in nature, then in preschool and school age, improper nutrition and the habit of holding in stool may be the main cause. The article covers clinical signs - infrequent bowel movements, hard stools, pain during defecation, flatulence and general discomfort. It also highlights the importance of taking anamnesis, physical examination and, if necessary, instrumental examinations in making a diagnosis. The treatment tactics are selected according to age, and the need for diet therapy, fluid regimen, probiotics, laxatives and explanatory work with parents is justified. Early prevention and an individual approach are important factors in preventing complications.

Keywords

constipation, pediatric gastroenterology, intestinal motility, functional constipation, diet therapy, pediatrics, laxatives, prevention.

The issue of children's health is one of the priorities of every society, and constipation is one of the most common problems in pediatric practice. Constipation is important not only because it slows down or makes it difficult to pass stool, but also because it negatively affects the general physical and mental state of the child. At different age stages, intestinal activity changes physiologically, therefore, the clinical course of constipation also differs depending on age. Especially in the first years of life, the immaturity of intestinal motility, changes in the type of nutrition and the process of adaptation to external factors play an important role.

In infants, constipation is often functional in nature and is associated with improper feeding, incompatibility of artificial mixtures or lack of fluid. In preschool children, the habit of holding in the stool, fear of going to the toilet or psychological discomfort may be the main factor. At school age, a sedentary lifestyle, a lack of fiber in the diet and insufficient fluid intake create the basis for the development of constipation. In this regard, it is advisable to evaluate constipation not only as a symptom, but as a multifactorial syndrome.

Clinical signs of constipation are manifested by a decrease in the frequency of bowel movements, hardening of the stool, pain during defecation, flatulence, abdominal distension, and decreased appetite. In prolonged cases, complications such as anal fissures, hemorrhoids, or incontinence may occur. This reduces the child's quality of life, increases psychoemotional stress,



and causes anxiety in parents. Therefore, early diagnosis and proper management tactics are of great importance.

In modern pediatrics, constipation management requires a comprehensive approach. It is recommended to organize an age-appropriate diet, include fiber-rich foods in the diet, ensure sufficient fluid intake, increase physical activity, and, if necessary, use drug therapy. It is also important to educate parents and form a correct defecation reflex in the child.

This article discusses the clinical features of constipation in children of different ages, etiological factors, and effective treatment tactics from a scientific and practical point of view. The relevance and prevalence of the problem require an in-depth study of this topic.

Constipation in children often develops under the influence of several factors. The causes may differ depending on age, but in general they can be divided into functional and organic factors.

Lack of fiber-rich products (vegetables, fruits, cereals) in the diet

Abundance of fast foods and sweets

Early transition to artificial mixtures (in infants)

Low water intake leads to hardening of feces.

In preschool and school age, a child deliberately holds in his bowels, fearing painful defecation. This causes feces to remain in the intestines for a long time.

Low physical activity weakens intestinal peristalsis.

Adaptation to kindergarten or school

Stress, fear

Changes in the family environment[4]

For example, Hirschsprung's disease is a condition caused by the lack of nerve endings in the colon glucocorticoid deficiency.

Hypothyroidism (underactive thyroid gland)

Central nervous system damage can disrupt bowel function.

Medications

Iron supplements, some anticonvulsants, or painkillers can cause constipation.

In infants:

Artificial feeding

Incorrect introduction of complementary foods

Immaturity of the intestinal microbiota



In preschool age:

Delayed toileting

History of painful defecation

In school age:

Uneven diet

Strain during school hours

Low exercise[7]

Constipation in children is often related to lifestyle and diet and is functional in nature. However, in cases of prolonged or severe symptoms, it is necessary to exclude organic causes. Early prevention — proper nutrition, adequate fluid intake, physical activity, and the formation of proper hygiene skills — is important in preventing the problem.

The problem of constipation in children is one of the most widely studied topics in pediatrics and pediatric gastroenterology. The scientific literature covers the etiology, clinical course, and treatment principles of this condition from various perspectives. In particular, the 2014 guidelines developed by the North American Society for Pediatric Gastroenterology, Hepatology, and Nutrition (NASPGHAN) and the European Society for Pediatric Gastroenterology Hepatology and Nutrition (ESPGHAN) clearly define the criteria for the diagnosis and treatment of functional constipation in children. This document focuses on a clinical approach based on the Rome III criteria, history taking, and “red flag” symptoms.[5]

Studies published by Benninga, Marc A. et al. (2016) indicate that the prevalence of functional constipation in children ranges from 0.7% to 29%, and the importance of age and psychological factors is substantiated. The authors emphasize that the habit of holding in the stool and painful defecation are the main mechanisms in the transition of constipation to a chronic form.

Also, in randomized clinical trials conducted by Tabbers, Merit M. and co-authors, polyethylene glycol (PEG) preparations were recommended as an effective and safe means for the treatment of constipation in children. The results of the study showed that PEG gives faster and more stable results than lactulose. These data are also reflected in international clinical recommendations.[2]

This issue has also been widely studied by scientists from the CIS countries. For example, in pediatric manuals published under the editorship of Baranov, Alexander A., alimentary, neurogenic and organic forms of constipation in children are distinguished and age-specific clinical signs are described in detail. The authors emphasize the importance of diet therapy and psychocorrection.

Studies by Uzbek scientists have also studied the role of nutrition and intestinal microbiota in children. Local sources indicate that insufficient consumption of fiber-rich foods in preschool children is a cause of constipation. Some studies scientifically substantiate the positive effect of probiotics on intestinal peristalsis.



In general, the analyzed literature confirms that constipation in children has a multifactorial and age-dependent clinical course. International recommendations recommend the use of an integrated approach - a combination of diet therapy, behavioral therapy and, if necessary, drug treatment. At the same time, some studies do not sufficiently address long-term prevention strategies, which indicates the need for additional scientific research in this area.

Constipation in children is a multifactorial clinical syndrome characterized by decreased bowel movements, hardening of feces, and painful defecation. In pediatric practice, it is divided into functional and organic types. According to statistics, 90-95% of cases of constipation in children are functional, and no anatomical defect in the intestine is detected. Organic causes (for example, congenital intestinal anomalies, metabolic or neurological diseases) are less common, but their timely detection is important.[1]

With increasing age, the anatomical and functional maturation of the intestine continues. In infants, intestinal peristalsis is not yet fully formed, and the defecation reflex is mainly unconditioned. Diarrhea can be observed frequently in breast-fed children, but when switching to artificial mixtures, the density of feces increases. During the period of introducing complementary foods, the composition of the intestinal microbiota changes, which can cause episodes of constipation.

In preschool age, the defecation reflex gradually becomes a controlled process. The child learns to hold in his bowel movements, which sometimes leads to the formation of the habit of deliberately delaying bowel movements due to painful defecation. As a result, stool stays in the intestines longer, absorbs more water, and becomes harder. This is pathological creates a cycle of “pain-fear-holding”.

At school age, factors such as a sedentary lifestyle, delayed bowel movements during classes, and rapid and irregular eating negatively affect intestinal motility. Also, psychoemotional stress and stress can disrupt intestinal function through the autonomic nervous system.

Infancy (0–1 year)

Constipation during this period is often functional. The main symptoms are: delayed bowel movements for more than 2–3 days, hard stools, straining and discomfort during defecation. Abdominal distension, crying, and decreased appetite may be observed. If the child is gaining weight well and his general condition is satisfactory, in most cases this is a physiological variation.[6]

However, if the following “danger signs” are present, organic causes should be excluded:

Meconium excretion after 48 hours;

Vomiting, especially with bile;

Rapid abdominal distension;

Growth retardation.

Preschool age (1–6 years)



The main cause of constipation during this period is the habit of holding in stool. The child, fearing painful defecation, deliberately delays defecation. As a result, the volume of feces increases and defecation becomes more painful. Clinically:

Feces less than 2 times a week;

Hard, lumpy feces;

Pain and crying during defecation;

Sometimes incontinence (encopresis).[5]

At this age, psychological factors - adaptation to kindergarten, new environment, relationship with parents - play an important role.

School age (7 years and older)

Constipation at school age becomes more chronic. The child holds in stool due to the child's reluctance to go to the toilet during classes or due to the inconvenience of the conditions. The predominance of fast food and low-fiber foods in the diet also slows down bowel movements. Clinical signs: abdominal pain, flatulence, loss of appetite, headache, and general weakness. In some cases, anal fissures may occur.

The diagnosis of constipation is based mainly on clinical data. The history is taken to determine the frequency of diarrhea, stool consistency, pain, eating habits, and psychological factors. Physical examination includes palpation of the abdomen and assessment of the condition of the perianal area.

Laboratory and instrumental examinations are performed only if an organic cause is suspected. For example, thyroid hormones, glucose, and electrolytes can be tested. If necessary, irrigography or rectal manometry are used.[4]

Treatment of constipation requires a step-by-step and comprehensive approach.

Stage 1: Education and explanatory work

Parents are explained the functional nature of constipation, the duration of treatment, and the need for patience. It is important to conduct a positive motivational conversation with the child.

Step 2: Diet and lifestyle modification

Include fiber-rich foods (vegetables, fruits, whole grain bread) in the diet;

Drink enough fluids;

Establish a habit of going to the toilet at the same time every day;

Increase physical activity.

Step 3: Drug treatment



If the diet does not give enough effect, osmotic laxatives (for example, polyethylene glycol-based preparations) are used. They soften the stool and make defecation easier. Sometimes short-term stimulant laxatives can be used, but their long-term use is not recommended.

Step 4: Psychological support

If there is a habit of constipation, it is useful to work with a psychologist. It is important to create a comfortable and safe environment for the child.[2]

Untreated constipation can become chronic and lead to anal fissures, hemorrhoids, encopresis, and psychoemotional disorders. Preventive measures include proper nutrition, sufficient fluid intake, an active lifestyle, and the formation of hygiene skills.

Early detection and an individual approach allow for effective control of constipation in children. Complex therapy not only normalizes intestinal function, but also improves the overall quality of life of the child.

Constipation in children of different ages is a common and multifactorial clinical condition, the manifestation of which is closely related to age-specific anatomical and physiological characteristics, nutrition, the degree of maturation of intestinal motility, and psychoemotional factors. Studies and clinical observations show that the majority of childhood constipation is functional in nature and can be effectively controlled with the right approach. At the same time, a differential approach is important, since clinical signs and underlying causes manifest differently at each age stage.

In infancy, constipation is more associated with nutritional factors and the immaturity of the intestinal system, while in preschool age, the habit of holding in stool and painful defecation constitute the main pathogenetic chain. In school age, malnutrition, a sedentary lifestyle, and socio-psychological factors predominate. Therefore, constipation should not be considered only as a decrease in the frequency of diarrhea. It is necessary to assess constipation not as a single entity, but as a complex syndrome that affects the overall quality of life and psychological state of the child.[8]

The tactics of treatment should be organized gradually and on the basis of an individual plan. First of all, explaining the essence of the problem to parents, establishing a proper diet and fluid regimen, and forming a regular defecation reflex in the child are the main measures. In most cases, introducing fiber-rich foods into the diet, increasing physical activity, and normalizing the daily routine give a positive result. If necessary, age-appropriate and safe laxatives can be used, but they should always be prescribed under the supervision of a doctor.

Early detection and timely and correct treatment of constipation are crucial in preventing complications. Prolonged constipation can lead to anal fissures, encopresis, chronic disorders of bowel function, and psycho-emotional discomfort. Therefore, it is advisable to form preventive measures from childhood.

In general, effective management of constipation in children requires a comprehensive approach, taking into account age-specific clinical features, as well as medical and psychological support. An individual and systematic approach can not only normalize bowel function, but also ensure the healthy growth and development of the child.



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