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TREATMENT OF CHRONIC CONSTIPATION IN CHILDREN

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Abstract:
Constipation is one of the most common complaints and is observed in approximately 3% of children, and in 90% of cases it is functional in nature. In the pathogenesis of chronic constipation, 3 mechanisms are possible: a decrease in propulsive motility and visceral sensitivity of the rectum, as well as a functional impairment of fecal evacuation. Regardless of the specific cause, chronic constipation tends to progress due to overstretching of the intestine and a decrease in its sensitivity. Treatment of functional constipation begins with correction of diet and drinking regimen, and only if these measures are ineffective, bowel cleansing is carried out and laxatives are prescribed.

Keywords: Children, constipation, pathogenesis, treatment

INTRODUCTION

Constipation is often viewed as a trivial symptom that comes and goes on its own, but this belief is wrong. Constipation can have a serious impact on the social and physical well-being of the child, his relationships in the family and children's community. It does not always respond well to treatment and requires long-term observation. Despite obvious progress in understanding the origins and mechanisms of constipation, the possibilities for its treatment in children remain limited.

MATERIALS AND METHODS

One of the main difficulties in discussing the problem of constipation in children is the lack of a clear definition of this condition; It is only clear that constipation is more a symptom than a disease. Constipation may be interpreted differently by the patient and the physician; and in pediatrics the situation is even more complicated, since the doctor is guided by the subjective assessment of the parents. It is generally accepted to view constipation as a dysfunction of the intestines, expressed in an increase in the intervals between bowel movements compared to the individual physiological norm or systematically insufficient bowel movements.

RESULTS AND DISCUSSION

Under physiological conditions, the frequency of bowel movements can vary depending on the nature of nutrition, the amount of fluid consumed and other circumstances. In children of the first months of life who are breastfed, the frequency of stool can be from 1 to 6–7 times a day; when switching to definitive nutrition, stools become thicker and less frequent. For children over 3 years of age, normal fluctuations in the frequency of bowel movements are considered to be from 3 times a day to 3 times a week. In table Figure 1 shows the normal frequency of stool in healthy children of different ages (according to questionnaire data). Based on these ideas, we can talk about constipation in children under 3 years of age if the frequency of stool is less than 6 times a week, for children over 3 years of age - less than 3 times a week.

Chronic constipation is a systematic decrease in bowel movements for 2 months or more.

Additional criteria for chronic constipation may include:

- tension during bowel movements;
- episodes of stool or encopresis;
- periodically (every 7–30 days) passing large quantities of stool;
- palpable feces along the intestine, more often in the left lower quadrant of the abdomen.

At the same time, it is important to pay attention to the nature of the stool. A more accurate assessment of the nature of stool is the Bristol scale, according to which the 3rd and 4th types are the normal form of stool, while the 1st and 2nd also indicate a slowdown in intestinal transit , i.e. about constipation.

Population-based studies in Europe and Asia have shown that constipation occurs in 10–20% of people [1, 2]. Approximately 3% of children complain of constipation when visiting a pediatrician; 10–25% complain about constipation when visiting a pediatric gastroenterologist [3]. Constipation is considered functional if there are no anatomical causes for its occurrence. Constipation can be secondary, due to damage to the spinal cord, systemic and endocrine diseases, or taking medications. Only in 10% of children is constipation associated with organic pathology; in 90% of cases it is functional in nature.

The most common causes of functional constipation include a diet poor in dietary fiber, systematic suppression of the urge to defecate, stress, and past

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intestinal infections. In 90% of children, no obvious cause for constipation can be identified.

The mechanisms underlying functional constipation are very diverse. They may involve disruption of the functions of the entire colon, rectum, anal sphincters, the regulatory influence of mediators of the enteric nervous system, and, finally, may be the result of voluntary stool retention.

All mechanisms come down to three pathogenetic options:

• decreased propulsive motor skills;
• violation of visceral sensitivity of the rectum;
• functional obstacle to fecal evacuation. Decreased propulsive motility may be genetically determined or associated with microstructural abnormalities of the colon. F. P. Abrahamian et al. confirmed a hereditary predisposition in 40% of 186 children suffering from constipation [4]. Constipation occurs 6 times more often in monozygotic than in heterozygotic twins [5], and in adults suffering from constipation from an early age, certain features of dermatoglyphics are revealed [6]. Hypomotility may be based on underdevelopment of the ganglia of the intermuscular or submucosal plexus of the intestine (hypogangliosis) or the layer of connective tissue located between them (desmosis) [3].

Reduced visceral sensitivity of the rectum can be primary or secondary. It is known, in particular, that sensitivity decreases as a result of damage to the spinal cord. According to P. Meunier et al., in 65% of 144 children with persistent constipation, rectal sensitivity is reduced [3]. According to I.A. Komissarov et al., spina bifida of the sacral region is often detected in children with constipation, and constipation can be combined with neurogenic bladder dysfunction [5]. On irrigography, with this option, the distal part of the colon may be dilated, but emptying is normal. When assessing volume-threshold sensitivity using a colodynamic study, a decrease is detected. This type of constipation is called hyporeflex constipation.

A functional obstacle to evacuation may be associated with spasm of m. levator ani or impaired relaxation of the puborectal loop. According to rectal endosonography, 4% of children with chronic constipation have hypertrophy of the internal sphincter. However, what most often prevents evacuation is the child's active retention of stool, which can be caused in young children by the lack of correct defecation skills, and in older children by inconvenient conditions or lack of time. Sometimes stool retention in a child is associated with pain during defecation, which can be caused by a fissure of the anus, its inflammation, or the very dense nature of the stool.

Prevention of stool retention is carried out with the help of laxatives. This treatment begins immediately after cleansing the intestines and continues for several months at a dose that ensures regular bowel movements (at least 3 times a week) and the absence of side effects.

The following groups of laxatives are distinguished:

1. Irritating receptors:
• plant anthraglycosides (rhubarb, buckthorn, senna, zoster);
• synthetic (sodium picosulfate, phenolphthalein, bisacodyl);
• castor oil, glycerin.
2. Salt:
• magnesium sulfate, sodium, magnesium oxide, sodium phosphate.

CONCLUSION

Additional areas of therapy for constipation in children are correction of intestinal microbiocenosis with the help of pro- and prebiotics, physiotherapy, balneotherapy and biofeedback, which is especially effective for encopresis.

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