

Digestive Diarrhea Syndrome In Children Under One Year Of Age

Temirova Aydin Husan kizi

Department of Propaedeutics of
Children's Diseases and Polyclinic Pediatrics, ASMI

Abstract. Almost every article devoted to the condition of the gastrointestinal tract (GIT) in young children begins with a phrase about the high frequency of occurrence of disorders of the digestive system in the first year of life. In case of functional disorders (FD) of the GIT, digestion and absorption of food, motor function, composition of the intestinal microbiota and activity of the immune system change. The causes of FD often lie outside the affected organ and are caused by a violation of the nervous and humoral regulation of the digestive tract.

Keywords: functional disorders, regurgitation in infants, rumination syndrome in infants, cyclic vomiting syndrome, neonatal colic, functional diarrhea.

INTRODUCTION

Almost every article devoted to the condition of the gastrointestinal tract (GIT) in young children begins with a phrase about the high frequency of occurrence of digestive system dysfunctions in the first year of life and statistical data - from 55-57 [1] to 90% [2]. In functional disorders (FD) of the GIT in infants, unlike organic diseases, the appearance of clinical symptoms is not accompanied by any organic changes in the GIT (structural abnormalities, inflammatory changes, infections or tumors) and metabolic abnormalities in the child's body [3]. With FD of the GIT, changes in motor function, the process of digestion and absorption of nutrients, as well as the composition of the intestinal microbiota and the activity of the immune system can be observed. The causes of functional disorders often lie outside the affected organ and are caused by a disruption in the nervous and humoral regulation of the digestive tract [3, 4].

MATERIALS AND METHODS

The manifestation of FN is facilitated by both the anatomical and physiological features of the development of the gastrointestinal tract of a child at an early age, and violations of the regime and technique of feeding infants. In many ways, the physical, social, and moral state of the mother determines the frequency of FN of the gastrointestinal tract of her child. It is noted that FN of the gastrointestinal tract is much more common in first-borns, long-awaited children, and children of elderly parents [2]. However, despite the absence of organic changes, FN of digestion in a child in the first months of life without timely assistance - drug treatment, correction of the quality and regimen of nutrition can lead to the development of chronic diseases of the gastrointestinal tract [1]. Most often, parents turn to a pediatrician with complaints during a routine examination. However, in some cases, without seeking help, parents begin to treat the child themselves. Basically, both of them believe that FN of the intestine is the lot of all babies. Nevertheless, you can help the child by understanding the causes of the violations. And most often the pediatrician has to do this.

According to Rome III criteria (American Gastroenterological Association Institute, 2006) [2], functional gastrointestinal disorders in newborns and young children (up to 3 years) are represented by chronic or recurrent symptoms without structural or biochemical disorders.

First of all, during the initial appointment, when collecting the medical history and examining the child, the pediatrician should draw the parents' attention to possible "alarm symptoms" to exclude organic pathology of the gastrointestinal tract. And if such symptoms are present in the child, then additional in-depth, and often invasive, examination is required. During the appointment, it is necessary to carefully ask the parents what symptoms are observed - regurgitation, vomiting, aerophagia, etc., in order to exclude inaccuracies and errors. In addition, it is necessary to remember that isolated dysfunction of the gastrointestinal tract is rare in a child, especially in the first six months; usually the disorders are combined.

RESULTS AND DISCUSSION

The National Program for Optimizing Feeding of Infants in the First Year of Life contains definitions of gastrointestinal tract functional disorders. Regurgitation is a spontaneous reflux of gastric or gastrointestinal contents into the oral cavity. In infants in the first year of life without organic changes in the gastrointestinal tract, regurgitation can be caused by various reasons: rapid sucking, aerophagia, overfeeding, violation of the feeding regimen, inadequate selection of formulas, vegetative-visceral disorder syndrome in cerebral ischemia (pylorospasm, cardial chalasia), gastrointestinal dyskinesia, early transfer to thick food, hereditary diseases associated with metabolic disorders [4]. The incidence of regurgitation syndrome in infants in the first year of life, according to various researchers, varies from 18 to 50% [4]. Regurgitation is mainly observed in the first 4–5 months of life, are observed much less frequently at the age of 6-7 months, with the introduction of thicker food - complementary foods. By the end of the first year, regurgitation syndrome is practically not encountered, since the child is in a vertical position most of the time - sitting, standing [3].

When examining a child and collecting anamnesis, the most common causes of functional regurgitation can be identified: rapid sucking, aerophagia, overfeeding, violation of the feeding regimen, inadequate selection of mixtures, syndrome of vegetative-visceral disorders with a violation of the central nervous system, gastrointestinal dyskinesia, early transfer to thick food [4].

According to the recommendations of the ESPGHAN expert group, the intensity of regurgitation is usually assessed on a five-point scale, which reflects the combined characteristics of the frequency and volume of regurgitation, which helps to assess the clinical picture and the required amount of assistance.

Treatment of functional regurgitation syndrome includes a number of stages. First of all, work with parents, explaining the need for the nursing mother to follow a diet, exclude products that cause gas formation, and avoid overfeeding. In addition, it is necessary to carry out postural therapy after each feeding, holding the child in an upright position after each day and night feeding for 20-30 minutes. To exclude aerophagia, it is necessary to teach the mother how to properly latch the child to the breast. It is necessary to remember that regurgitation syndrome, like any functional gastrointestinal tract disorder, is not an indication to abandon natural breastfeeding in favor of artificial feeding. But it is possible to prescribe mixtures with thickeners, which are added to expressed breast milk. Drug therapy includes drugs: improving the state of the nervous system, energy-tropic drugs, improving the state of the gastrointestinal tract - prokinetics, antacids, probiotics, enzymes, as well as drugs that reduce the manifestations of the consequences of regurgitation syndrome - vitamins, antiflatulence agents, etc. It is very important to use non-drug treatment methods - therapeutic and hydromassage, hardening, adherence to the daily routine and nutrition of the mother [3]. Rumination - recurring periodic attacks of contraction of the abdominal muscles, diaphragm and tongue, leading to the reflux of gastric contents into the oral cavity. The child again chews and swallows the contents or spits them out. Rumination is characterized by the onset at the age of 3-8 months, and the lack of effect from changing the nature of nutrition and the type of feeding (transition to feeding through a nipple with expressed milk, artificial feeding). This condition may be a symptom of deprivation or a sign of severe organic damage to the central nervous system. Rumination must be differentiated from regurgitation syndrome and cyclic vomiting syndrome. This rare disorder occurs mainly in boys, usually occurring at the age of 3-14 months. It can be fatal; according to some data, up to 25% of children with rumination die. The differential diagnosis should include congenital malformations of the gastrointestinal tract and especially pylorospasm [4].

CONCLUSION

Informative examinations include ultrasound examination of abdominal organs, fibroesophagogastroduodenoscopy, X-ray examination of the gastrointestinal tract and kidneys and urinary system [5]. The presence of increased gas formation can obscure the view of internal organs, therefore, carminative drugs are used a day before the examination, which reduce the number of gas bubbles in the intestine. Simethicone preparations (Sab® Simplex) are optimal for these purposes. In addition to FN of the gastrointestinal tract, there are other threats. Both adults and children may experience acute exogenous poisoning, in particular from foaming substances - shampoos, dishwashing detergents, etc., containing surfactants and additives with fruit, chocolate or vanilla aroma. When they get into the mouth, small children often swallow them, carried away by the "tasty" smell, which leads to the development of acute

exogenous poisoning. Excessive foaming during bathing contributes to the ingestion of the product and poisoning or aspiration of the respiratory tract.

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