

## FEATURES OF THE COMARBID COURSE OF IRRITABLE BOWEL SYNDROME AND BRONCHIAL ASTHMA IN CHILDREN WITH CONNECTIVE TISSUE DYPLASIA

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### ABSTRACT

This article is a clinical study that revealed the commonality of phenotypic features characteristic of BA and IBS. We studied 112 children aged 5 to 18 years with bronchial asthma with connective tissue dysplasia: 43 of them had disorders of the gastrointestinal tract. Among the sick children we observed, it was noted that children are often exposed to various stressful situations both at home and in public groups (kindergartens, private and ordinary schools): misunderstandings of the lesson, failure to complete the assigned task, stress before exams, excessive susceptibility to the teacher's remarks or teacher, conflicts among peers. At the heart of the pathogenesis of bronchial asthma and irritable bowel syndrome, one of the factors that causes a significant trigger is a violation of the psychosomatic status.

**Key words:** *bronchial asthma, children, irritable bowel syndrome, connective tissue dysplasia, psychosomatics.*

### ACTUALITY

To date, IBS against the background of connective tissue dysplasia remains an urgent problem, characterized by a variety of clinical symptoms. Numerous attempts to identify the mechanisms of influence of connective tissue dysplasia on the development of the pathology of the digestive tract in children made it possible to decipher their individual links, but many problematic issues remain unresolved. The lack of a holistic picture of pathogenesis, the complex mechanisms of damage to the digestive tract and bronchial asthma in CTD dictate the need for further research in this area [1,6,11]. Recently, the problem of CTD has also been of great interest to practitioners due to an increase in the detection of patients with this pathology [9]. The frequency of detection of CTD syndrome is quite high from 26 to 80% depending on the study group [4,5].

In the development of the pathologies we are studying, one of the important factors is the very psyche of the child. Experiences in the pubertal period often lead to a violation of the psycho-emotional state, which is a trigger for the development of irritable bowel syndrome (IBS) and some phenotypes of bronchial asthma. [1,2] Appeal to a pediatrician with this pathology is up to 12% among all patients, and 28% of patients observed by a specialist gastroenterologist [3].

Causes of functional disorders - disorders of the regulation of the body, due to "extraorganic" (psycho-emotional, stress, endocrine, etc.) factors [1, 4, 10].

According to D. A. Drossman (1994), which has become a classic definition, functional disorders of the gastrointestinal tract are various combinations of gastrointestinal symptoms without structural and biochemical disorders.

We used the classification adopted in the Rome III criteria proposed by the Committee and the International Working Group on the Development of Criteria for Functional Disorders in 2006.

The frequent detection of signs of connective tissue dysplasia (CTD) in children with gastroenterological diseases (from 30 to 72%) and, conversely, the high incidence of pathology of the digestive tract against the background of this syndrome (57–88%) prove their relationship [7, 8].

In children suffering from IBS and BA against the background of CTD, gastrointestinal lesions in children are often expressed in microanomalies of the gallbladder, neuro-emotional disorders and astheno-neurotic reactions, there is a tendency to inflammatory diseases of the stomach and intestines, often complicated by perforations and bleeding; biliary dyskinesia (23%), gallbladder constriction (13%), duodenogastric reflux (9%), gastroesophageal reflux (7%), cellular gallbladder (3%) are noted [9].

## PURPOSE

To reveal the features of the clinical course of bronchial asthma and irritable bowel syndrome in children against the background of connective tissue dysplasia.

**Materials and methods:** In the multidisciplinary clinic of the Tashkent Medical Academy in Tashkent, in the department of allergology, under our supervision there were 112 children aged 5 to 18 years with bronchial asthma with connective tissue dysplasia: 43 of them had disorders of the gastrointestinal tract.

(group 1) amounted to 18 (41.8%) children with IBS - with a predominance of constipation;

(group 2) - in 9 (20.9%) children with a predominance of diarrhea;

(Group 3) - 16 (37.2%) children mainly with abdominal pain and flatulence;

1 group IBS - with a predominance of constipation		2 group IBS with a predominance of diarrhea;		3 group IBS predominantly with abdominal pain and flatulence;	
Girls	Boys	Girls	Boys	Girls	Boys
12 (66,6%)	6 (33,3%)	7 (77,7%)	2 (22,2%)	11 (68,7%)	5 (31,2%)

As follows from the table, among the children we observed, a significant percentage (69.7%) were girls, which is consistent with the literature data.

All observed patients underwent the following clinical and laboratory studies (general blood count, urine, feces, bacteriological examination of feces). Functional studies were carried out according to indications (spirometry, peak flowmetry, ultrasound of the abdominal organs; FGDGS).

## EXAMINATION RESULTS

Among the sick children we observed, it was noted that children are often exposed to various stressful situations both at home and in public groups (kindergartens, private and ordinary schools): misunderstandings of the lesson, failure to complete the assigned task, stress before exams, excessive susceptibility to the teacher's remarks or teacher, conflicts among peers. According to the literature, a number of authors of the above factors lead to the development of such symptoms as: stuttering, tics, urinary and fecal incontinence, frequent colds, headaches, other pronounced or causeless pain, functional strabismus. These factors result in the following diseases: tonsillitis, chronic tonsillitis, otitis media, chronic nasal congestion, fever of unknown origin, various dysfunctions of the gastrointestinal tract (chronic gastritis, gastric and duodenal ulcers, irritable bowel syndrome), skin diseases (neurodermatitis, eczema, psoriasis, dermatitis), diseases of the respiratory system (bronchial asthma, hyperventilation syndrome, causeless cough, chronic bronchitis), eating disorders (anorexia nervosa, bulimia, craving for overeating and, as a result, obesity [10]).

Among the patients we observed, each case was individual, and therefore we could not give a percentage of the frequency of occurrence of certain symptoms.

In children with a combined course of bronchial asthma and irritable bowel syndrome, the following external phenotypic signs of CTD were identified:

- thin hyperelastic skin - 30 (69%);
- anomalies of bite and growth of teeth - 6 (13.9%);
- high sky - 5 (11.6%);
- dolichocephalic shape of the skull - 3 (6.9%),
- sandal gap -11 (25.5%),
- flat feet -13 (30.2%),
- violation of posture - 18 (41.8%);
- joint hypermobility - 15 (34.8%);
- deformed and low-lying auricles - 7 (16.2%).

When identifying the most significant external phenotypic signs of connective tissue dysplasia, a high rate in 30 (69.7%) was observed in children with thin hyperelastic skin.

Less significant signs were revealed in the following numbers: flat feet - 13 (30.2%), posture disorder - 18 (41.8%), joint hypermobility - 15 (34.8%);

In addition, stigmas of dysembryogenesis from the gastrointestinal tract were detected in 43 children examined by us:

- biliary dyskinesia - 4 (9.3%);
- constriction of the gallbladder - 2 (4.6%);
- duodenogastric and gastroesophageal reflux - 5 (11.6%);
- microanomalies of the gallbladder - 3 (6.9%).
- chronic gastritis and gastroduodenitis - 12 (27.9%)

To exclude infectious lesions of the gastrointestinal tract, patients underwent bacteriological examination of feces, the results were negative. In these cases of intestinal damage, IBS is associated with a psychofunctional mechanism.

All observed sick children, taking into account the violation of the psycho-emotional status against the background of basic therapy, were prescribed Tenoten at an age dosage for 1.5 months, which gave positive results in 72% of cases.

Given the manifestations of signs of connective tissue dysplasia, preparations containing carnitine chloride were connected to the treatment.

To correct all the necessary micronutrients, the drug was used clinonutren junior.

Sick children with IBS with a predominance of constipation received: drotaverine, duphalac, enzyme preparations, they were prescribed a diet with fiber enrichment. Patients of the 2nd group with IBS with diarrhea were prescribed smecta, asepsis (ersefuril), imodium with prebiotics.

Children of the 3rd group were prescribed drugs: enterosorbents, semiticone, pre and probiotics, antispasmodics. Depending on the time of the year, with a preventive goal to prevent exacerbations, patients underwent metabolic, specific therapy 3 times a year.

## CONCLUSION

1. At the heart of the pathogenesis of bronchial asthma and irritable bowel syndrome, one of the factors that causes a significant trigger is a violation of the psychosomatic status.

2. One of the most significant external phenotypic signs of CTD in 30 (69%) children was thin hyperelastic skin. Less significant signs are flat feet - 13 (30.2%), postural disorders - 18 (41.8%); and joint hypermobility - 15 (34.8%);
3. On the part of the gastrointestinal tract, dysembryogenesis stigmas: acute gastritis and gastroduodenitis were most often detected - which amounted to 12 (27.9%).
4. The frequency of occurrence of the combined course of IBS in bronchial asthma was higher in girls in 30 (69.7%).
5. In the complex treatment of children with bronchial asthma in combination with IBS against the background of connective tissue dysplasia, the drug Tenoten was prescribed to improve the psychosomatic status, a positive effect was observed in 72% of children.

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